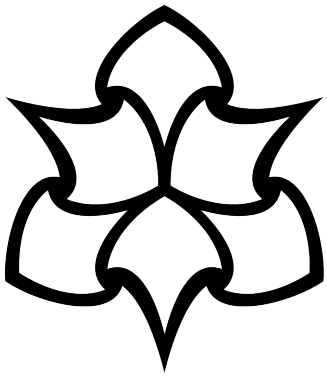

Circular Economy Fashion Strategies

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Declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or institution of learning.

Abstract

Current design thinking focuses on incremental improvements to a linear system in which products are designed, produced and eventually disposed of. This continued consumption has resulted in over 1 million tonnes of discarded clothing and textiles entering into landfill each year in the UK. The effect of this high volume of waste is not only the loss of embodied energy and value, as re-useable items are disposed of, but continued environmental degradation through greenhouse gas emissions, toxic pollution and rapidly declining landfill space. Whilst consumers are increasingly aware of the consequences of continued consumption, there are limited options to act more responsibly. As much as 70% of textile waste is sent to landfill or incineration from municipal waste collections.

In order to investigate these problems it was necessary to consider points at each stage in the cycle using an exploratory sequential mixed methods approach combining case studies, semi-structured interviews and a consumer survey. The practices of those collecting, sorting and grading post-consumer textiles, and those working within circular economy fashion to maximise the reuse and revaluation of such materials through their design practice, were analysed through semi-structured interviews, structured observation and process mapping. An online survey questionnaire evaluated how current consumer attitudes and behaviours would impact upon a circular economy fashion system, assessing how demographic categories define the way individuals view their own practice as consumers, users and eventual disposers.

Results show the post-consumer textile collection industry to be in a state of flux. Organisations seeking to reuse and recycle post-consumer clothing and textiles face challenges in promoting the responsible disposal of these items in order to secure supply. Falling sale prices and uncertain collection volumes mean collectors are constantly struggling to extract as much value as possible through sorting and grading activities. Of the volumes collected for reuse and recycling, profit margins are low, resulting in drop in value of around 93% from new to used. Brands and designers working to create change by offering more conscientious product choices are struggling to connect with mainstream fashion consumers, hindered by a lack of industry acceptance and media coverage. Barriers to scaling up circular economy fashion strategies include a lack of market knowledge relating to consumers and the most effective promotional and retail strategies. Consumer insights show the youngest demographic group to be the most characteristic fashion leaders, but they also show the least regard for conscientious consumption. Regarding disposal, over one quarter of respondents across all demographic categories reported throwing old clothes in the bin, with convenience

a major factor in such decisions. Indications from consumers show that those working within the industry, such as the brands, designers, producers and employers are viewed as having the greatest responsibility for making conscientious ethical and environmental choices. These findings present significant evidence to guide the development of an effective fashion communication strategy for a circular economy. The outcome is the proposal of a conceptual framework for transitioning towards a circular economy fashion system. This framework provides a guiding strategy for the successful integration of circular economy fashion practices into the mainstream.

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1. Introduction

The fashion industry functions as a complex, interrelated network of supply chains, stakeholders, information and material flows and cyclical timelines representing a vibrant and profitable multi-level industry. Fashion design and production cycles are highly iterative and at times non-linear, however points of similarity exists between processes that can be summarised. A design brief outlines a task or problem; market research and creative inspiration inform decisions, while the design and synthesis phase proposes solutions. Sample making precedes promotion, marketing and wholesale orders, before production, distribution and consumption. Feedback loops within the cycle of materials supply, consumer demand, trend information and sales reports keep the critical path of the fashion system flowing constantly in this manner, without cessation.

More recently, disasters such as the Rana Plaza factory collapse in Bangladesh have highlighted the less desirable aspects of the industry and fostered a new wave of concern over malpractice and triple bottom line sustainability. The hyper-consumption of mainstream fashion emphasises contrasts with sustainable approaches, distinguishing between two main types of production and supply chain management. Fast fashion facilitates mass production and fosters an insatiable fashion appetite by producing new collections every two weeks (Sharma and Hall, 2010). In contrast to this, slow fashion focuses on sustainability values, reflected in the use of low impact and environmentally benign raw materials and manufacturing techniques that consider labour rights, worker safety and life-cycle effects using systems thinking approaches. New collections arrive biannually or quarterly. (Fletcher, 2008; LeBlanc, 2012). The triple bottom line aspects of social, environmental and economic impacts intuitively define the concept of sustainability (Markusen, 2003; Elkington, 2004; Gunder, 2006). The harshest societal effects of the fashion industry are those upon the workers producing garments in factories globally. Ensuring safe working conditions and fair wages, allowing collective bargaining, and community support of schools and public facilities are steps which sustainable fashion strives to make commonplace in modern fashion supply chains (Harris, 2003; Parker, 2013).

Environmental sustainability in the fashion industry directly connects to production, use-phase and disposal practices, such as utilising less harmful raw materials and reusing and recycling discarded clothes and textiles (Chen and Burns, 2006). Key metrics such as water use, carbon emissions, and waste and pollution levels indicate the scale of human transgression past the safe planetary boundaries from which a reversal of damage may have been possible. In the UK alone, 90 million tonnes of water was used by the clothing and textile industry, and 70

million tonnes of waste water were produced. The UK clothing and textile industry also produced 3.1 million tonnes of CO_{2e} emissions in 2011 from 989,000 of fossil fuel. Globally the Carbon Trust (2011) estimate that the purchase and use-phase of clothing equates to over 850 tonnes of CO_2 per year globally. In 2009 the safe planetary boundary of 350ppmv had already been exceeded and stood at 387ppmv (Rockström, 2009). 80% of the carbon impacts of clothing result from use-phase practices such as frequent high temperature washes, tumble drying and ironing (Draper et al., 2007).

Estimates place the global worth of the apparel and footwear market to be over £1 trillion (Kirchain and Olivetti, 2013; Keller et al., 2014). The most valuable activities in the supply-chain taking place at the lead firms, with manufacturing outsourced and low waged. Those in East Asia, where 60% of production is concentrated (Kirchain and Olivetti, 2013) are subject to labour rights abuses (Parker, 2013) and wages so low they amount to just 15% of the calculated living wage (Muller and Maher, 2012; Clean Clothes Campaign, 2013). Even in the UK, where the British Fashion Council (2010) considers working conditions in the industry to benefit from more equal opportunities, Hammer et al. (2015) have found evidence of widespread and commonplace labour abuses, including wages as low as £3 per hour, bullying, threats and humiliation. This social and economic imbalance is a reflection of current design thinking, which focuses on incremental improvements to existing designs for the purposes of added value consumption. This approach is dictated by the limits of existing production systems and profitability from low value and high throughput, and has increasingly come under scrutiny and criticism (Livesey and Thompson, 2013).

A more balanced approach to resource efficiency requires the re-engineering of how products, components and materials are valued. The Circular Economy introduces sustainable patterns of consumption through responsible production and sustainable re-industrialisation that builds resilient infrastructure (United Nations, 2016). End-of-life materials are reused, recycled, recovered or restored as secondary raw materials in a cyclical systems of inputs and outputs (Ellen MacArthur Foundation, 2013a). Renewable energy and the sustainable management of natural resources are emphasised (European Commission, 2011a). The need for on-going innovation to transition the sector into a continuous positive development cycle underpins the establishment of circular economy fashion strategies.

Initiatives from the United Nations and European Commission have been limited in their legally binding capacity to achieve sustainability by alleviating global poverty. International agreements have been largely voluntary and have emphasised development through economic growth, often funded by global creditors. For the resulting financial obligations to be remunerated natural resources are exploited and environmental degradation follows. (World

Commission on Environment and Development, 1987; Drexhage and Murphy, 2010). Decoupling prosperity and development from growth creates commitment to fairness and flourishing in a finite world (Oliver-Solà, 2010). Framing development in the context of whole systems thinking emphasises sustainability as the desired outcome, and provides guiding principles, processes and methods to enhance thinking on a systems based scale to utilise more circular methods of problem solving (Blizzard and Klotz, 2012). To formulate effective strategies in a circular economy, whole systems thinking necessitates the consideration of each stage in a cycle, from design and production to development and prosperity. Each stakeholder's role and viewpoint must be considered to ensure harmony and efficiency.

For effective circular economy fashion strategies it is necessary to consider each stage in the cyclical process of fashion design and production; including consumer viewpoints, use-phase and purchasing behaviours, resulting garment divestment through donation, disposal or other means and the collection of these end-of-life textiles. A significant proportion of landfill volume consists of clothing and textile waste which contributes to toxic pollution, greenhouse gas emissions and the rapidly diminishing space for further landfill waste (Fletcher, 2008; DEFRA, 2009). Much of the clothing and textiles entering into landfill through residual household waste could have been reused, recycled or recovered, creating both financial and environmental savings (Woolridge et al., 2006; Bartlett et al., 2013). At least half of all textiles disposed of in the UK in 2010 were sent to landfill and diverting just 10% of this could have recovered value of over £25 million (Bartlett et al., 2013). Household and kerbside collection schemes present the most favourable option for consumers, for whom convenience is the major factor concerning reuse and recycling (Morley et al., 2009), however vulnerability to theft and disputed collections have led to civic amenity donation banks to become the most frequently used collection systems (Woolridge et al., 2006).

Charity textile collection provides the highest volume route for unwanted clothes and textiles, which are processed and sorted, before being exported for reuse and resale (Bartlett et al., 2013). A hierarchy of end markets exists, in which highest quality items are sold and reused in the west, less good items exported to Eastern Europe, Africa and Asia and lowest grade items recycled, incinerated or put into landfill (Farrant et al., 2010). Proportionally, around 75% of these export sales are for reuse, and 18% are sold as recycling grades (Bartlett et al., 2013). A minimal percentage of collected textiles are upcycled into well-designed higher value items, which retail for prices comparable to those made from virgin fibres. A number of small, niche upcycling enterprises have emerged in the UK and Europe, setting a precedent for successfully creating stylistically relevant and commercially successful fashion styles utilising waste textile materials. Limited consumer understanding of the features and benefits of sustainable fashion combined with a lack of mainstream fashion coverage have restricted

sales and growth in this area. Moreover, price is a major determinant for consumers making purchases decisions, leading individuals to actively seek out the cheapest fashion offerings rather than the most sustainable (Joergens, 2006; Pookulangara and Shephard, 2013). Consumers may express good intentions to purchase ethical alternatives, however evidence suggests that sustainable purchasing behaviour does not follow on what is stated, indicating a 'values-action gap' (Goworek et al., 2012).

1.1 Scope of the Study

This research was situated within the context of the global fashion industry, with the scope of this study taking in eighteen separate brands, designers, retailers, textile collectors, charities and expert stakeholders from the UK, Europe and the USA. As low quality value fashion continues to be consumed at increasing rates, consumer demand for newness and falling garment quality has led to a profusion of waste textiles. With over 350,000 tonnes of textiles entering into landfill each year in the UK, it is necessary that we look to new ways of changing the linear model of consumption and disposal. A number of sustainable fashion enterprises are successfully making use of waste textiles and innovative design and production techniques. The challenge presented is how to scale up these businesses or integrate their practices into the mainstream for maximum environmental, social and economic benefit.

This research investigated opportunities to reuse both post-consumer and pre-consumer waste through the sustainable design strategy of upcycling and through fashion related circular economy business strategies. Major barriers to mainstream adoption are consumer perceptions of sustainable and upcycled fashion, and consistency of supply for designers and retailers. Consumers may indicate that they would choose sustainable garment options if given the choice, however research and sales figures show a clear 'values action gap' in which this is not the case. Low prices and relevant styles appear to be the most important factors for consumers, with ethical values thought of as a secondary bonus feature. Theories on closing the 'values-action gap' focus on re-engineering key points of impact within the current system. Examples range from connecting consumers to a more emotionally durable relationship with the provenance of their purchases, to closed loop fast fashion models, in which consumption continues at pace, but garments are cycled back into the production system instead of becoming waste.

Slowing down fashion cycles and reconnecting consumers with the skills to mend, care for and maintain their garments is also thought to create a more nurturing and symbiotic relationship between consumers and producers. As resources become increasingly scarce, labour costs rise and environmental degradation continues, the challenge to find solutions

becomes ever more salient. The additional challenge of the inconsistency of supply for upcycling designers and those retailers approached to stock garments produced in this way makes scaling up the benefits of reusing waste increasingly challenging. Shared networks of information may address this problem, yet convincing those producing the most waste to engage in transparency may prove an even greater challenge. This research investigates opportunities to maximise the benefits of circular economy fashion business models, through waste textile sourcing capabilities, consumer perspectives, and innovative design thinking for large-scale production.

1.2 Aims

1. To analyse the current practices of post-consumer textile collectors.
2. To analyse the current practice in circular economy fashion design and communication strategy.
3. To evaluate how consumer attitudes and behaviours impact on a sustainable fashion system.
4. To propose a conceptual framework for transitioning towards a circular economy fashion system.
5. To develop an effective fashion communication strategy for a circular economy.

1.3 Research Design

The purpose of this study was to develop and propose a guiding framework to integrate sustainable circular economy practices into mainstream fashion in order to maximise the potential environmental benefits of reuse and recycling textile waste activities. To do this it was necessary to identify the pre-existing value streams for discarded textiles, current practices to reuse and revalue these textiles and current consumer attitudes and behaviours in relation to the design, promotion and retail of sustainably produced fashion. This mixed methods study combined both quantitative and qualitative data collection techniques and analysis, for which a critical realist approach was adopted to observe and record the reality of post-consumer textile collection and circular economy fashion. In this way, the identifiable order of the events and processes at work, such as textile collection, sorting and grading, can be understood through practical observation, data collection and theoretical analysis (Bryman, 2012). In order to interpret observations, provisional categories were assigned, which were flexible and subject to change in relation to the generative mechanisms they describe. Once the integral structures which generate these events and processes have been recognised and

understood in context, it is then possible to effect change on these generative mechanisms (Bryman, 2012). The study worked to meet targets outlined in the UK government's Waste & Resources Action Programme (WRAP) reuse agenda (Williamson, 2012); firstly to identify the 'opportunities to develop new partnerships and frameworks that will enable significant behaviour change within the industry', and secondly to promote 'waste prevention and the development of a closed loop approach for priority materials and products, such as textiles.'

An overview of the research design is shown in Figure 1. An appropriate strategy was developed to address each of the research aims, which is covered in greater detail in Chapter 3. For Aim 1 it was necessary to identify what the processes in place were to collect, sort, grade, re-value and re-sell post-consumer textiles, in order to analyse the current practices of post-consumer textile collectors. This enabled the quantities and values of collected and reprocessed textiles to be assessed as part of a circular economy system. For Aim 2 the systems in place to revalue discarded textiles from industry and consumers through reuse, recycling, re-design and upcycling were examined more closely, alongside the mechanisms to communicate the features and benefits of sustainable fashion to consumers. Aim 3 evaluated how consumer attitudes and behaviours would impact on a sustainable fashion system in a circular economy by examining how consumers viewed their own garment purchasing and discarding behaviour, where their preferred sources of information were located and how they viewed their role and responsibility as consumers within a circular fashion system. Synthesis of the results from prior research phases enabled the characterisation of necessary considerations for integration into a more circular mainstream system and accorded the proposition of a conceptual framework for transitioning towards a circular economy fashion system in Aim 4. Identification of the generative processes within textile collection and circular economy fashion design, and the causal influences of consumer behaviour relating to circular economy fashion systems allowed inferences to be made regarding the development of an effective communication strategy in Aim 5.

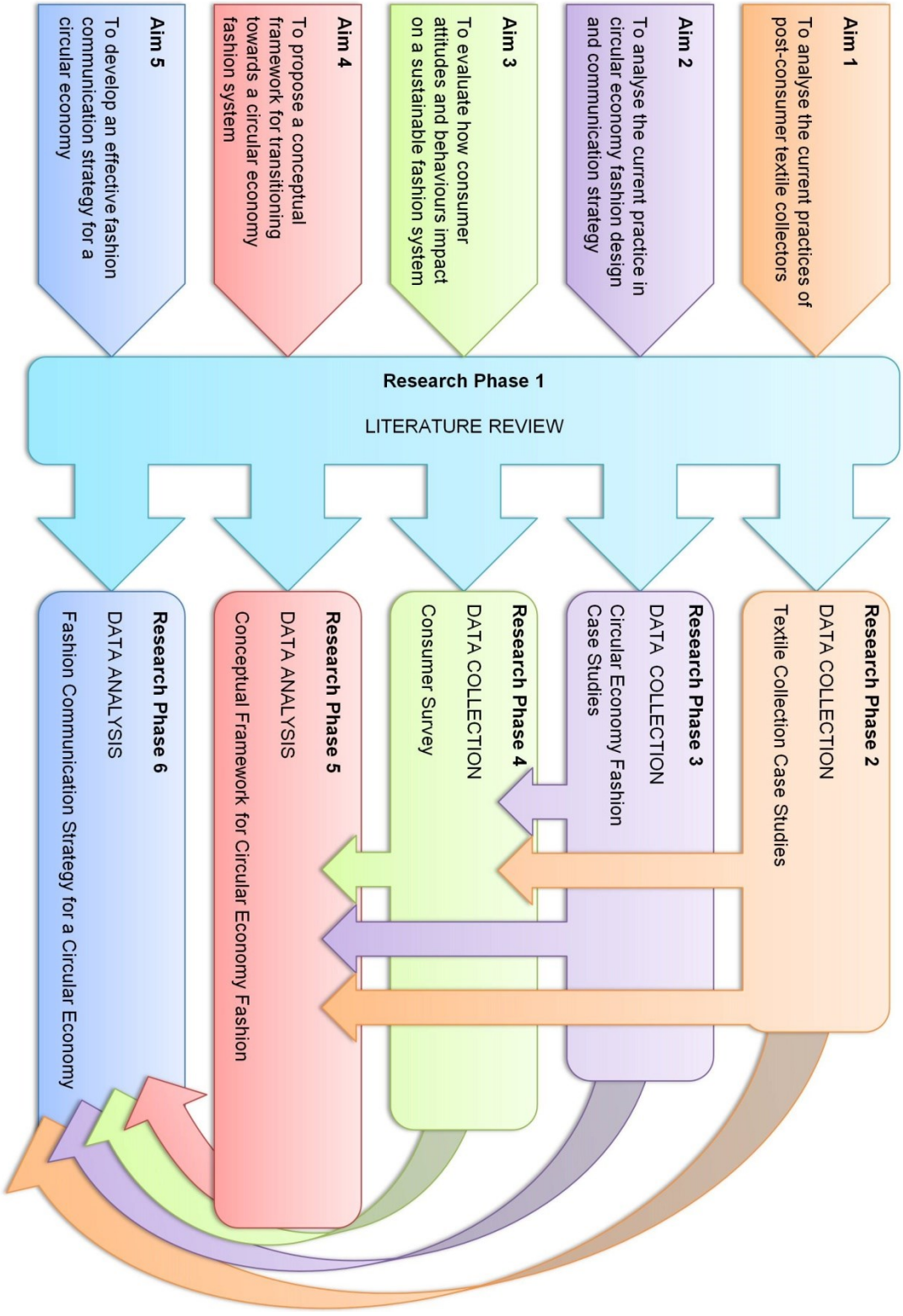


Figure 1. Research Design Overview

1.4 Chapter Outline

In **Chapter 2,** a review of literature covers global sustainability initiatives and sustainable design strategies such closed loop manufacturing. Waste policies and management were also covered, including textile waste, collection and value adding strategies such as recycling and upcycling, followed by the fashion industry and its social, economic and environmental impacts, as well perspectives from retailers, brands and consumers, including analyses of purchasing and discarding behaviours and attitudes. A critical review of literature enabled the identification of key areas for consideration and formed a basis for primary data collection techniques, such as developing interview questions.

In **Chapter 3,** the methodology of the study is introduced, covering the research philosophy, mixed methods strategy, research design, sampling procedures, data collection and analysis methods. The case study and survey approaches for textile collection, circular economy fashion practices and consumer perspectives include the techniques of structured observation, semi-structured interviews and online questionnaires. Participant selections and interview schedules are also presented in this section.

Chapters 4, 5 and 6 comprise the findings, analysis and discussion of the research:

In **Chapter 4,** findings related to the textile collection case studies are presented. A cross case synthesis of interview data, company archives, observational case study notes and process models give a representative picture of textile collection, sorting and grading practice. These results are used to identify potential between the textile collection industry and circular economy fashion, in which increased value and resource efficiency may be obtained.

In **Chapter 5** interview findings from brands, designers and experts in the field of ethical and sustainable fashion are presented, including feedback and findings that inform the development and refinement of an upcycling process model developed during MSc research into upcycling in the UK womenswear industry. Industry perspectives on communication and consumer issues are presented here to inform the development of circular fashion communication methods and integration into mainstream fashion.

In **Chapter 6** consumer survey findings relating to garment purchase and divestment attitudes and behaviours are presented, which established existing preconceptions amongst consumers regarding sustainable fashion products, in order create effective communication strategies for circular economy fashion and facilitate integration into mainstream fashion.

In **Chapter 7,** a conceptual framework for a circular economy fashion system is proposed combining the findings and analyses from the literature, case studies, and survey research.

The framework indicates the stages and links which are vital to an effective system. A fashion communication strategy for a circular economy is then presented which draws together insights from literature and findings from textile collectors, circular economy fashion informants and consumer survey respondents.

In **Chapter 8**, the conclusions of the research are drawn together. Implications of the study and proposed model for industry, academia and education are presented. Recommendations for further research and actions to implement the circular economy fashion strategies proposed.

2. Literature Review

2.1 Global Environmental Impacts

On Earth Day 2015 a group of leading scientists and economists released a statement that 'three-quarters of known fossil fuel reserves must be kept in the ground if humanity is to avoid the worst effects of climate change' (Vaughan, 2015). In fact, human impact upon the planet is currently exceeding Earth's regenerative capabilities by around 50% and at least half of this is caused by carbon emissions alone (Global Footprint Network, 2014). According to Rockström (2009) the safe planetary boundary of 350 ppmv of atmospheric CO_2 has already been exceeded globally, and currently stands at 387 ppmv. The effects of this are threats to ecological life-support systems through global warming and polar ice loss. As Nakano (2010) highlights, this ecological overshoot indicates a significant reduction in Earth's capability to sustain future generations. With 85% of the world's population living in a country which exceeds Earth's regenerative capability it is essential that we look to new ways of reducing our impact (Global Footprint Network, 2014).

2.1.1 Global Sustainability Initiatives

Sustainable development policies have been driven by a number of summits, reports and agreements, but perhaps the most significant have been the four UN Earth Summits and the UN commissioned Brundtland report. The first Earth Summit (The United Nations Conference on the Human Environment) took place in Stockholm in 1972, where there was a recognition of the need to act to prevent irreversible harm to the environment (United Nations, 1972). The Brundtland report in 1987, laid the preparations for multilateral agreements between nations working towards sustainable development goals (World Commission on Environment and Development, 1987). This was followed up by the second, third and fourth Earth Summits. The UN Conference on Environment and Development took place in 1992 in Rio de Janeiro, where international agreements were made. The Agenda 21 plan was one of the important outcomes of the Rio Earth Summit, which emphasised waste reduction, resource conservation, and control of pollution (Dadigamuwage, 2012). This was followed by the UN World Summit on Sustainable development in 2002 in Johannesburg, in which the slow delivery and commitment of the agreements was highlighted. Most recently the 2012 UN Conference on Sustainable Development, once again in Rio de Janeiro, emphasised voluntary approaches for nations to take responsibility of individually.

The 1987 Brundtland Report proposed long-term environmental strategies for achieving sustainable development (Dadigamuwage, 2012). The report includes one of the most widely recognised statements defining sustainable development:

'Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development, 1987).

The report's main focus was on achieving sustainability through alleviating poverty, as this was viewed as a root cause for many social and environmental problems. As the report states, many forms of development can erode environmental resources, and environmental degradation can in turn undermine economic development. If those with the least wealth were not as economically disadvantaged, natural resources would not need to be exploited to meet financial obligations to global creditors. In this scenario those with the least accept growing poverty, while exporting their scarce resources to those with an economic advantage (World Commission on Environment and Development, 1987).

The Brundtland report emphasised economic growth as essential to alleviating poverty, and outlined responsibilities for more developed nations to ensure that international economic exchanges operated with fairness and ecological considerations (World Commission on Environment and Development, 1987). Despite successive Earth Summits and international agreements and declarations, this is clearly not in practice. The view of development as purely economic growth has led to developed nations accruing vast amounts of wealth, while developing countries are left with seriously depleted natural resources and threatened biodiversity and environments (Drexhage and Murphy, 2010).

A lack of responsible action, coupled with a resource-intensive model of global development has resulted in numerous negative externalities, for which no one nation or group has taken full responsibility for. As well as depleted natural resources, these costs include rising pollution and waste (Poitter and Desai, 2008; Drexhage and Murphy, 2010). Agenda 21 did address the management of waste, but did not examine the benefits of recycling and reducing the production of waste or the need to improve waste disposal techniques (Poitter and Desai, 2008). Crang et al., (2013) have highlighted that 'the relocation of the manufacturing industry to developing countries and the global distancing of supply chains have been major economic trends, but that more recently, obsolete and discarded products have come to constitute globalised flows travelling in the other direction', indicating a more positive shift in resource efficiency.

The European Commission's 2012 'Manifesto for a Resource Efficient Europe' states that 'In a world with growing pressures on resources and the environment, the EU has no choice but to go for the transition to a resource-efficient and ultimately regenerative circular economy.' (European Commission, 2012). In this new paradigm, used resources are indefinitely cycled back into production processes, instead of entering into the end-of-life waste stream, as in a 'linear 'take – make – dispose' economic model' (Bonciu, 2014). This circular model has the potential to create 'more value from each unit of resource by recovering and regenerating products and materials at the end of each service life', creating significant material savings (Ellen MacArthur Foundation, 2013b).

The European Commission's 2012 'Manifesto for a Resource Efficient Europe' also promised to take actions to achieve a circular economy by:

'Creating better market conditions for products and services that have lower impacts across their life-cycles, and that are durable, repairable and recyclable, progressively taking the worst performing products off the market; inspiring sustainable life-styles by informing and incentivising consumers, using the latest insights into behavioural economics and information technology, and encouraging sustainable sourcing, new business models and the use of waste as raw materials (European Commission, 2012).'

2.1.2 UK Waste and Recycling

Of the 200 million tonnes of waste generated by the UK in 2012, the greatest proportion (50%) was from construction. Commercial and industrial activities accounted for nearly one quarter and households 14%. 186.2 million tonnes of this waste entered into final treatment, and nearly half was recovered, however 26.1% entered into landfill (DEFRA, 2015b). The rate of recycling in the UK has been growing steadily from just 6% 1995/96 (Nakano, 2010). Recycling rates have climbed from 40.3% in 2010, to 42.9% in 2011 and 43.9% in 2012, with an EU target for a 50% recycling rate by 2020 (DEFRA, 2015b). Improvements may be due to the steady increase of landfill tax since its implementation in 1996. Landfill tax is currently at its highest at £82.60 per tonne, up significantly from the £7 per tonne since its inception, as can be seen from Figure 2.

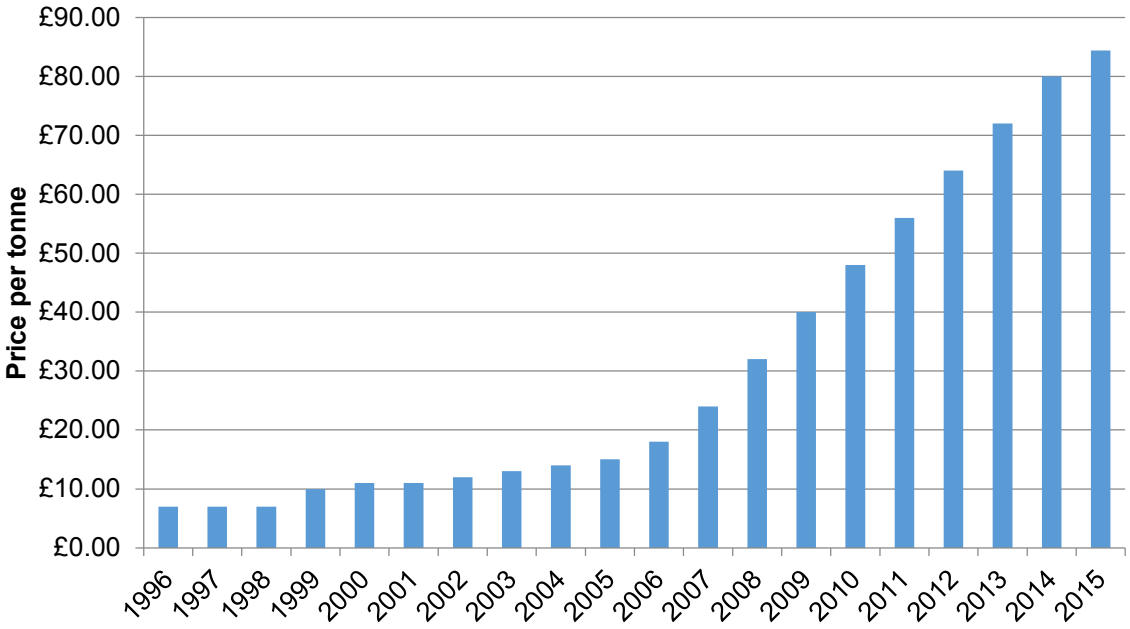


Figure 2. Landfill Tax 1996 – 2015.

(www.ifs.org.uk/ff/landfill.xls, 2015)

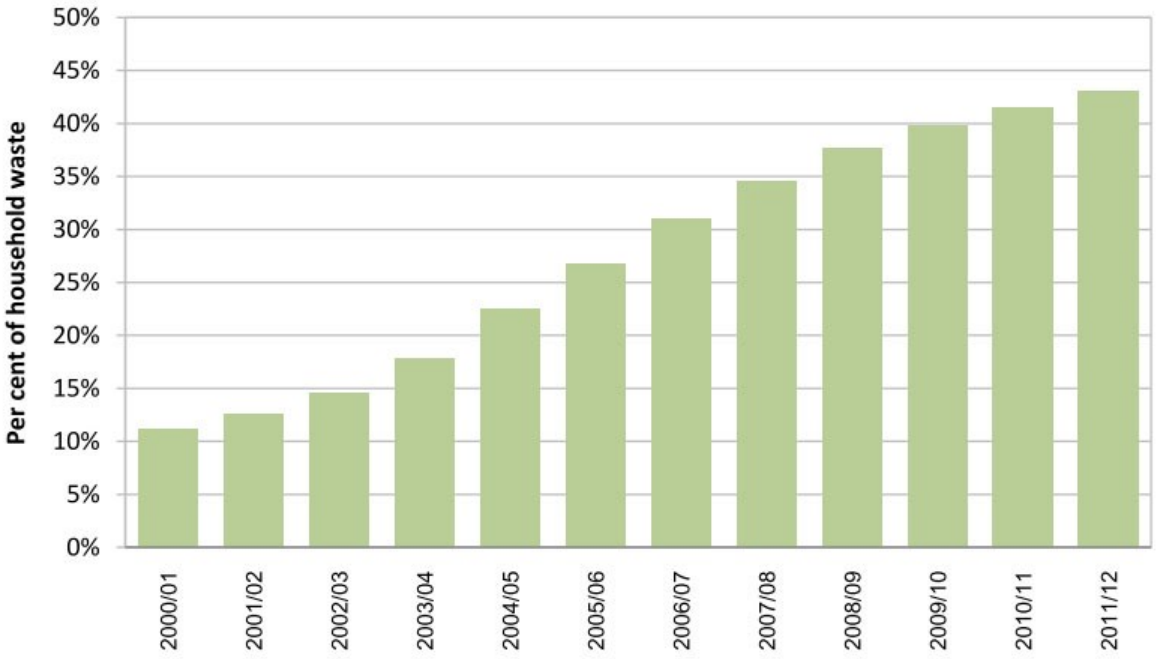


Figure 3. Household Waste Recycling Rate, England, 2000/01 to 2011/12

(DEFRA, 2013)

As can been in Figure 3, recycling rates have slowed, as the 'increase in 2011/12 was the smallest for ten years with the rate of increase slowing since its peak around 2005' (DEFRA, 2013).

2.1.3 UK Waste and Sustainability Initiatives

In 2005 the UK government published the 'Securing the Future' report, which aimed to deliver UK sustainable development strategy, building on the work of the 1992 Rio Earth Summit. The report set out a strategic framework to deliver goals aligned to the economy, society and the environment. Important measures included encouraging waste minimisation and recycling through landfill tax, enhancing measures to close the loop in resource use, promoting more radical new designs solutions which benefit the environment and the economy, 'building up knowledge and the capacity needed to drive improvements in product markets and reducing the environmental impacts of everyday products across their life cycle' (UK Parliament, 2005).

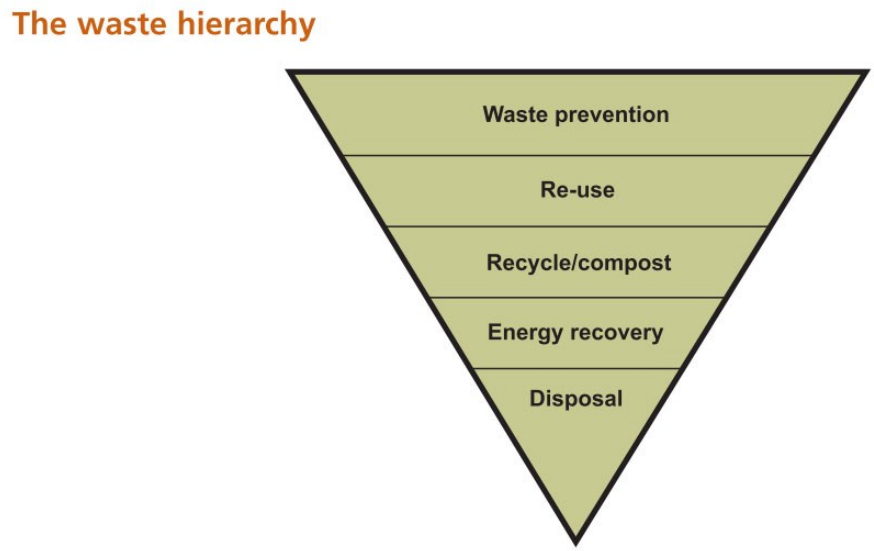


Figure 4. The Waste Hierarchy

(DEFRA, 2007b)

The Department for Environment Food and Rural Affairs (DEFRA) leads the UK Government work on sustainable development and the green economy, while the Waste Resources and Action Programme (WRAP) works to create initiatives for sustainable resource use, developing evidence and solutions for the most resource intensive sectors (DEFRA, 2015a; WRAP, 2015b). In 2007 DEFRA outlined ten priority areas, drawn from four high impact product areas. Clothing is one of these priority products (DEFRA, 2007a). Textiles (including clothing) have been identified as a key target area for reuse by WRAP due to the high levels of embodied carbon these products represent (Williamson, 2012). DEFRA give priority to reuse before recycling according to the waste hierarchy (DEFRA, 2011).

2.1.4 UK Waste Textiles

Textiles are not currently widely recycled by household waste collection programmes; however they still make up a significant portion of residual waste volumes. Including commercial waste, Bartlett et al. (2013) estimated that over half of all textiles disposed of in the UK in 2010 (53%) were sent to landfill (1,386,000 tonnes), and a further 350,000 tonnes (13%) were used to produce energy from waste (EfW). Much of this was clothing and footwear from household residual waste, which could have been reused or recycled. It is estimated the value of the textiles discarded through kerbside residual waste and destined for landfill to be worth £238 - £249 million had these textiles been reused or recycled. 'Recovering just 10% of this residual waste would generate a potential sales value of almost £25 million' (Bartlett et al., 2013).

Of the 2.7 million tonnes of textiles consumed in the UK in 2010 approximately 660,000 tonnes (25%) were collected reuse, recycling or recovery and 232,000 tonnes of textiles (9%) were unaccounted for, that is, they are consumed but not reused, recycled or disposed of. The 'national wardrobe' is a significant proportion of this, which is textiles stored in lofts and cupboards for later use. This gives a recycling rate of around 30% (Bartlett et al., 2013).

With 64% of textiles still destined for landfill or EfW, Morgan and Birtwistle (2009) and DEFRA (2009) have cautioned that landfill space is due to run out in less than 10 years due to human activity, and methane emissions such as those created by the biodegradable waste in landfill, including natural fibres used in clothing, have been recognised as being 21 times stronger than CO_2 as a greenhouse gas. The UK clothing industry alone is responsible for the equivalent release of 3.1 million tonnes CO_2 per year, as well as creating 20 million tonnes of waste water (Madsen et al., 2007; Minney, 2011). Rising consumption is a key factor in the significant adverse environmental and social effects throughout the clothing industry (DEFRA, 2010). For example, 'purchasing a 250g cotton T-shirt implies purchasing 1,700g of fossil fuel, depositing 450g of waste to landfill and emitting 4kg of CO_2 into the atmosphere', making the clothing industry a major contributor to waste, emissions and energy usage (Allwood et al., 2006).

Across its supply chain, the environmental impacts of clothing include energy consumption, greenhouse gas emissions, resource depletion, water consumption, toxic pollution and hazardous waste (DEFRA, 2010). Overall in the UK, clothing contributes to around:

- '5% of the global carbon footprint of UK goods and services'
    - '38 million tonnes of CO_{2e}'
- '6-8% of the global water footprint of UK products and household use'
    - 6,300 million m^3 of water
- 1.8 million tonnes of waste material, including an estimated 350,000 tonnes of clothing which was sent to landfill. (WRAP, 2012c).

Up to 80% of the carbon footprint of clothing can be caused in its use phase by overly frequent washes, higher wash temperatures, tumble drying and ironing. Modern, larger capacity washing machines which are used part full more frequently exacerbate the problem and negate the benefits of recommended lower wash temperatures (Draper et al., 2007). Production impacts are generated from processing fossil fuels into synthetic fibres, in farming fibre crops using water, fertilisers, pesticides and herbicides and in dyeing and finishing textiles and garments throughout the supply chain (Draper et al., 2007). The increased consumption of low value clothing in the last ten years is directly at odds with the UK commitment to reduce environmental footprints. Resulting carbon and water impacts occur in overseas location already challenged with climate change and water supply problems. Effects will increase in severity as populations grow and global communities will struggle to find adequate supplies of clean water.

Social, economic and ethical impacts include poor working conditions such as child labour and sweatshop conditions in which low wages, long hours, a lack of workers' rights and health and safety provision exploit workers. Farmers and workers are further exploited by inequitable trading conditions, and ethical issues are raised regarding animal welfare for fleece, fibre, hide and fur producing animals used in garments. Complex global garment supply chains continue to present an ongoing challenge to transparency on social, environmental, economic and ethical criteria (DEFRA, 2010). WRAP (2012) indicates that environmental impacts of waste, carbon and water could be reduced by up to 20% each if UK stakeholders were to make significant changes to the supply, use and disposal of clothes and textiles, with potential financial savings of up to £3 billion per year.

Clothing accounts for ~5% of UK retail spend per year, as well over 5% of UK environmental impacts. Financially, this breaks down to ~£44 billion each year or ~£1,700 per household. Increasing the longevity of clothing could result in significant economic and environmental savings. Keeping clothing in use for an extra nine months, and extending garment lifespans to ~3 years has the potential to reduce the cost of clothing supply, use, maintenance and disposal by £5 billion a year (WRAP, 2012c). Farrant *et al*. (2010) stated that 'clothes are often discarded when much of their potential lifetime is left.' Woolridge *et al*. (2006) have quoted figures from the Salvation Army Trading Company Ltd that conclude that 'when clothing is disposed of, it still has at least 70% of its useful life left.'

2.1.5 UK Waste Clothing and Textiles Initiatives

In 2007, as part of the Sustainable Consumption and Production activities of the UK government, DEFRA began developing roadmaps on ten priority products and services with significant environmental impacts, one of which was clothing (Madsen et al., 2007). The UK government set out to identify, understand, and address the sustainability impacts arising from these priority products consumed and used in the UK. The Sustainable Clothing Roadmap focused on gathering evidence on the environmental, social and economic impacts of clothing across lifecycles, as well improving sustainability performance (DEFRA, 2007a). In 2010, DEFRA set out the Action Plan for the Sustainable Clothing Roadmap which targeted five key areas: environmental performance in the supply chain, consumption behaviours, awareness, market drivers and traceability.

More recently working groups within the Sustainable Clothing Action Plan have come to focus on garment design and longevity, reuse and recycling, consumer behaviour and metrics. During the WRAP's 'SCAP: Challenging Your Thinking' meeting in March 2015, the most recent progress of each working group was summarised. In tackling waste by extending garment longevity, design is key to this goal. Current clothing lifespan is around 2.2 years per garment; however the working group aims to add 9 months on to this for greater positive impacts. Alongside this aim WRAP created The Clothing Longevity Protocol, which offers designers, product developers, technologists, buyers and garment producers guidelines for good practice in creating higher quality, longer lasting garments with reduced environmental impact. Plans for garment brands to pilot the longevity protocol are also in development.

The reuse and recycling group have been looking at recovering maximum value from clothing. Areas of focus have included consumer communication, new collection methods, separation of clothing for reuse and recycling and effective ways of targeting collection and new markets for low value recycling grades. Reuse has the highest economic value for collectors and the main markets for this are Africa and Ukraine, however these are politically volatile markets

and there may be a future ban imposed on used textile imports into East Africa, creating further uncertainty in the market. Current fluctuations in the price for used textiles are a result of competition with France and Germany, as product value is directly linked to currency value. As a result prices are currently lower in France. Within the working group, it is felt that closer liaisons between retailers and new markets would enable greater engagement with retailers, and improve efficiency for retailers and sales.

The consumer behaviour working group include research into consumer acquisition and purchasing decisions, new business models (rental, sharing etc.), the in use phase of garment consumption (laundry, repair etc.) and the discarding phase and reducing the impacts of these elements. One of the group's main outputs has been the Love Your Clothes website, targeted directly at raising awareness amongst consumers of the value of clothes. The site provides consumers with information on how to make clothes last longer, reduce the impact of the use phase, dispose of unwanted clothes responsibly and make the most of what is already in their wardrobes.

The metrics working group looks specifically at carbon, water and waste impacts, plus improvement actions such as the Better Cotton Initiative (BCI). SCAP signatories and supporters contribute data on their footprints through self-verification, using SCAP's footprint calculator tool. The group found that between 2012 and 2013 cotton consumption had fallen and PET and cellulosic fibre use had risen. Concluding thoughts were that the biggest drivers of change are through the use of sustainable cotton such as BCI and organic cotton, recycling and longevity and reducing use phase impacts, often through choice of fibres. The group work to scrutinise facts such as CO_2 savings from organic cotton, and to further investigate consumer communication of these benefits through labelling. The aim is to help the industry to develop a conscious understanding of their decisions.

2.2 Post-Consumer Textile Collection

Joung and Park-Poaps (2013) note how current short fashion lifecycles and low prices have led to a proliferation of unwanted garments. Morley *et al.* (2009) identified that textiles collected for reuse and recycling grew substantially between 2003 and 2008, from 324,000 tonnes to 523,000 tonnes. A recent report by Bartlett *et al*. (2013) for WRAP shows the current figure to be 660,000 tonnes. Despite this increase in quantity, Brooks (2012) points out that clothing donors often do not understand the final market for their donations, which are retailed for profit and not freely distributed as donors believe. Bartlett *et al*. (2013) calculated that over 1.38 million tonnes of textiles are currently sent to landfills each year in the UK, much of which is clothing and footwear from household residual waste, which could have been reused or

recycled. For those textiles (clothing, footwear and bedding) diverted from the waste stream, the largest collection route was via charity retail, with 370,000 million tonnes of textiles per year handled by charity shops and a number of charity textile banks. This indicated a significant increase in tonnage by 48% since 2007, when 0.25 million tonnes were processed; significantly higher than the growth in consumption over this period (Bartlett et al., 2013).

Three typical organisations working to collect and re-value unwanted post-consumer textiles in the UK are I&G Cohen, TRAID and LMB Textile Recycling. I&G Cohen (IGC) were a Salford based family run business which has been in operation since 1959. Recently acquired by JMP Wilcox, the business continues to collect, sort and grade textiles from their premises in Salford. IGC have been assisting research into textile reuse and recycling since at least 2009, providing evidence for DEFRA's Maximising Reuse and Recycling of UK Clothing and Textiles report (Morley et al., 2009). In 2012 IGC partnered with Axion Consulting to deliver a series of compositional analysis trials on collected textile feedstocks for WRAP (Claes, Gardner, et al., 2012b). IGC provided all the textile feedstock for the trials, collected variously from municipal kerbside collections, textile banks, charity shops, charity door-to-door collections, branded workwear, donations to schools and 'Cash 4 Clothes' shops (Claes, Gardner, et al., 2012b; Ripper and Morrish, 2012). IGC also participated in PhD research into Sustainable and Remanufactured Fashion (Dadigamuwage, 2012).

TRAID are a London based charitable organisation, established in 1999. The charity funds projects to improve conditions in the global textile industry. The charity have their own upcycling label TRAIDremade, launched in 2002, which collaborates with designers, artists and makers to reconstruct and redesign damaged clothing which cannot be otherwise sold in their own charity shops (Clark, 2008; Sinha et al., 2016). Second-hand clothing which had been customised by TRAID designers has also been sold on the high street in Topman stores (Fletcher, 2008). In 2011 TRAID partnered with the London Borough of Bexley to participate in a kerbside collection case study for WRAP that collected a total of 4,351kg of textiles over 6 months, with one collection per household, per month. In 2013 TRAID took part in WRAP research into resource efficient business models in the clothing sector (Buttle et al., 2013; Cox et al., 2013).

LMB are a London based family run textile collection business, established in 1985. In 2009 LMB partnered with Nathan's Wastesavers and JMP Wilcox to form the now dissolved SortUK to support domestic textile sorting (Letsrecycle.com, 2009). In the same year results were also published from study with the Centre for Remanufacturing and Reuse (CRR) into the reuse and recycling of clothing, in which LMB provided a case study of textile collection processing (Hussey et al., 2009). LMB participated in PhD research into the potential for the wider use of

recycled synthetic materials in the UK (Nakano, 2010). LMB have also have participated in industry wide research addressing sector problems of textile collection theft with the London Waste and Recycling Board, and damage to textiles from co-mingled collections with WRAP, in which a 'survival bag' was developed to protect textiles in co-mingled collections (Ellen MacArthur Foundation, 2013b; London Waste and Recycling Board, 2014b). The active participation in on-going research into sustainable fashion and textiles demonstrates the suitability of these three organisations as exemplifying textile collectors in the UK to study, however to date, no one study has endeavoured to compare the collection, sorting and grading processes and value creation actions of these three collectors, demonstrating a clear gap in knowledge.

2.2.1 Textile Collection Methods

Three of the most common methods of textile collection are textile banks, charity or local authority kerbside or door-to-door collections, and charity shop surplus and unsold stock collections. Textiles can also be collected from sources such as Cash for Clothes shops, and school and workplace fundraising collections, although the UK still sends around 0.8 to 1 million tonnes of textile waste to landfill. The main market opportunity of diverting more of these waste textiles is to create more revenue for collectors and charities (Bartlett et al., 2013).

Textile Banks

Bartlett et al. (2013) cite textile banks as the route used for 36% of all collections, indicating this method as the main form utilised by surveyed collectors. This confirms an assertion by Woolridge *et al*. (2006) that civic amenity donation banks are also the most frequently used system, where clothes can be disposed of alongside other recycling facilities such as those for glass, paper and plastic. Joung and Park-Poaps (2013) therefore recommended increased drop-off sites or community collections bins, placed in easily accessible locations, as strategies to promote textile donation and prevent discarding. For a local authority to increase their provision of textile collection banks would require negotiation with the collection agency. Textile bank collection contracts are often complicated and contentious agreements between commercial organisations and local authorities. Often a commercial textile collector will not have the contract to collect from their immediate local vicinity, but for the region in which they have successfully tendered. Contracts will often not be exclusive to each region, with several organisations able to collect and operate in overlapping areas. For example in 2011 nine Welsh local authorities commissioned a regional textile bank contract with JMP Wilcox, a commercial collector based in the West Midlands (WRAP, 2012a), although Antur Waunfawr are another contractor who also collects in North Wales (Claes, Clissold, et al., 2012).

In a trial comparing the composition of textile feedstocks from various sources, Claes, Clissold, et al. (2012) found collections from textile banks to comprise of a high percentage (85%) of material suitable for re-use and resale across a wide range of markets, including premier grade, vintage, lightweight and heavyweight clothing most suitable for immediate resale in Eastern European markets. It was noted that most of the textiles were clean and some had even been freshly laundered prior to donation. According to Bartlett *et al*. (2013) 140,000 tonnes of textiles were collected through 12,000-15,000 textile banks in 2010, with an estimated increase of 3 to 4 tonnes per bank a year. This is a positive indication for their accepted use by the general public and it may be possible that increasing the convenience and availability of such services would be more effective and secure than kerbside collection. Morley et al. (2006) have quoted figures from the Salvation Army Trading Company which shows that textile bank donations peak around the autumn months and are at their lowest in December. Morley et al. (2006) cited research by The Charities Advisory Trust, that showed that 94% of the public believed charity shops to be an effective method of raising money for causes, and a survey from the Association of Charity Shops which showed that 51% of those donating used items did so in order to support a charitable cause.

While charities stand to benefit from the proceeds made through the resale of used clothing, theft of used textiles from collection sites can seriously undermine both the commercial and charitable gains to be made from textile collection, reuse and resale, tipping the balance in an already volatile industry. Estimates of lost revenue range from £2.5 to £50 million per year, or 15% of items. In a study into textile theft, the London Waste and Recycling Board (LWARB) estimated that textile theft from banks, at 11%, was higher than from door-to-door collections (just 2%). LWARB found that textile banks with letter box style openings were more susceptible to theft than those with chuted openings. Damage to locks was also recognised as a significant problem, with collectors such as LMB developing banks with no locks that required crane lifting to be emptied. A Market Snapshot published by WRAP in 2016 valued textile bank collections at around £220 per tonne, and figures published by Letsrecycle.com placed the value of textile bank collections between £150 to £260 per tonne in 2016 (Letsrecycle.com, 2016a). Figures from Letsrecycle.com show a clear drop in value for textile bank collection over the period from 2013 to 2016. Figures shown in a WRAP report on feedstock value from 2012 (£260 to £360) also show an overall drop in the value of textile bank collections compared to 2016 prices (Ripper and Morrish, 2012)

Door to Door Collections

Door-to-door collections are the second most widely used form of textile collection at 23% of all collections for those surveyed by Bartlett et al. (2013), and can include collections on behalf

of charities or local authorities. It is noted by Morley *et al*. (2009) that the availability of kerbside collection almost doubled in the period from 2002 to 2008, as consumer studies have shown convenience to be the major factor in increasing the reuse and recycling rates for clothing. Householders receive donation bags through their letter boxes and are asked to fill them with their unwanted clothes, textiles and other items such as books and toys, and leave them out on doorsteps for collection on a designated day. Due to the overlapping nature of door-to-door collections, donators can often be faced with a variety of options from different organisations all placing collection bags through their letter boxes. Bartlett et al. (2013) estimated that 23% of all textile collections surveyed occurred as part of charity door-to-door schemes. Local authorities also operate similar kerbside collection schemes, in which textiles are collected alongside household waste and recycling, and in combination it is estimated that a total of at least 109,000 tonnes of textiles were collected directly from homes in these two ways (21,000 from LA kerbside collections and 88,000 from charity door-to-door collections) (Bartlett et al., 2013).

The quality of textiles collected through either charity door-to-door or local authority kerbside collections in which textiles are pre-separated by donators; and co-mingled recycling collections in which textiles are placed in bins alongside other recyclates is vastly different (Ripper and Morrish, 2012). In WRAP's textile feedstock trials, results demonstrated that local authority kerbside collections and charity door-to-door collections yielded as much as 82% and 83% clothing suitable for re-use, respectively, whereas no items at all from the co-mingled collections were suitable for re-use without extensive washing and drying efforts (Ripper and Morrish, 2012). Potential recovery rates stood at around 37% for intact items requiring cleaning from the co-mingled collections, with the rest of the items too damaged, soiled and contaminated to be of use (Claes, Gardner, et al., 2012d). Items placed into collection bags for charity or local authority collections was found to be in good condition, and had been washed and often folded for donation (Claes, Gardner, et al., 2012a; Gardner et al., 2012).

Morley *et al*. (2009) recommended that in order to achieve a high reuse and recycling rate, the number of household collections schemes should be increased. However this would present an increased likelihood for the theft and 'bogus collection' of textiles left out for door-to-door collection (Bureau of International Recycling, 2013). Research undertaken by LWARB indicated that of the 32 collection routes samples, 18.75% of collections may have been subject to theft, resulting in around a rate of theft of 1.8% of all clothing left out for collection (London Waste and Recycling Board, 2014b). A lack of awareness by donators regarding who should be collecting bags left out for donation may, in part, account for bogus collections occurring. LWARB found that although all organisations collecting door-to-door were at least in part doing so to raise funds for charity, some made no reference to this at all, making it more

difficult for the public to check who should be collection the bags left out (London Waste and Recycling Board, 2014b). Further limitations to this collection method are presented in the average price range of the material. Collections could be purchased for between £600 to £900 per tonne in 2012, considerable more than other feedstock sources (Ripper and Morrish, 2012). Due to high costs and recognised problems with theft and disputed collections, it is questionable as to whether increased provision of door-to-door collecting in its current format would provide reliable solutions for diverting additional textiles from the waste stream, despite the factor of increased convenience for donators.

Charity Shop Collections

Charity shop collections account for 19% of all collections by weight for the commercial collectors surveyed, however Bartlett et al. (2013) note that they are the most widely used collection route available to the public, with over 9,000 shops in the UK. Donators are able to take their unwanted items to a charity shop, where the majority of donations are resold in the shops themselves, with any surplus or unsold stock sold on to commercial collectors for reuse or recycling. Bartlett et al. (2013) estimated this to be around 170,200 tonnes in 2010, or 46% of all charity shop donations. The quality of charity shop collections has been found to be high in a trial for WRAP by Burke et al. (2012). 88% of the charity shop sample was found to be suitable for reuse, including clean, intact clothing suitable for vintage, premier and export grades. To further ensure the high quality of charity shop collections that are sold onto commercial collectors, the Textile Recycling Association drew up guidelines in 2014 for 'Charity Shop Grade' clothing and textiles. These specifications were designed to eliminate waste and high concentrations of low value goods from the collections, ensuring that a reliable market value could be obtained for the items contained (Textile Recycling Association, 2014). Ripper and Morrish (2012) estimated the price of charity shop collections to be between £500 to £560 per tonne in 2012, although figures from letsrecycle.com (2016) show that the price of charity shop collections has fallen steadily over the period from 2013 to 2016; from a peak of between £530 to £580 per tonne at the start of 2013 to as low as £250 to £330 at the start of 2016.

Other Collection and Disposal Streams

Cash for Clothes shops offer consumer the opportunity to gain back some of the value from their unwanted clothes and textiles by selling them to a retailer or agent by weight. Consumers receive around £0.40 per kg of clothing (www.cash4clothes.co.uk). In samples surveyed on behalf of WRAP, Cash for Clothes collections were found to be in good condition, containing items suitable for reuse and export (Claes, Gardner, et al., 2012c). In-store collection schemes have also become more popular in recent years, with high profile campaigns by high street retailers; such as Marks and Spencer's 'Shwopping' and H&M's 'Recycle Your Clothes' initiatives. Working towards the responsible disposal of clothing, Marks and Spencer partnered with the globally renowned British charity Oxfam. As part of its 'Plan A' social responsibility objectives, the retailer ran a 'Clothes Exchange' scheme in which a £5 money off voucher is exchanged for each bag of returned, unwanted clothing, originally purchased from its stores (Morgan and Birtwistle, 2009; Marks and Spencer, 2011). The scheme not only increased donations of used clothing items, but also sales in stores (Morgan and Birtwistle, 2009). Through regular collections and two 'One Day Wardrobe Clear-Out' events, the scheme collected 1.8 million garments in its first year, and 3 million in its second year, helping to raise £3.3m for Oxfam (Marks and Spencer, 2011).

Consumers can also dispose of their unwanted textile items in household rubbish, where it enters into the waste stream and often ends up in landfills. Morgan and Birtwistle (2009) cited Burke *et al*. (1978) in categorising consumers as those who simply discard products or those who dispose of them responsibly. A report by Morley *et al*. (2009) recommended targeting lower socio-demographic households to obtain a higher yield of textiles, as it is suggested that lower socio-economic groups discard the greatest percentage of textiles in their residual household waste, indicating that it is low cost (and lower quality), rather than out-dated clothing which is discarded. In addition to such strategic methods, a recent trend for clothes swapping events has provided another means of recycling post-consumer textiles. Events such as these help raise public awareness of clothes swapping, as demonstrated by the BBC programme 'Twiggy's Frock Exchange (2008), in which participants exchanged items of clothing and accessories with each other, giving the items *'a new lease of life'* (Morgan and Birtwistle, 2009). Furthermore, Morley *et al*. (2009) claim that swap events or 'swishing parties' raise public awareness and the image of clothes swapping. These initiatives therefore demonstrate the importance of responsible deposits and collection of unwanted used textile clothing items.

2.2.2 Consumer Divestment Behaviour

Bray, (2008) describes divestment as the final stage in the consumption process, in which a purchased product will eventually be disposed of, implying a final waste stream, but for

Botticello, (2012) divestment entails the relegation of unwanted clothing to a textile bank for recycling or reuse. Collins, (2013) however gives a more holistic definition, in which divestment describes a gradual process in which objects are physically and emotionally separated from a subject through nested practices such as sorting, clearing, storing, gifting, selling and binning.

2.2.2.1 Motivating Factors in Garment Divestment

Traditional textile markets in the UK have declined and Morley et al. (2009) predict that 'the percentage of textiles in household waste has been forecast to rise more rapidly than other products or materials.' In investigating the factors motivating and influencing clothing disposal behaviours, Joung and Park-Poaps (2013) hypothesised that there were five interrelated motivational factors to examine: environmental, economic, charitable, convenience and lack of available information. Multiple motivations may also affect individuals, who may also engage in more than one type of behaviour. It was also found that consumer recycling behaviour was increased by any sort of incentive, but most especially monetary.

General Recycling Behaviour

In examining consumer attitudes linked to environmentalism; defined as 'the propensity to take actions with pro-environmental intent', Joung and Park-Poaps (2013) indicated that general environmental attitudes positively influenced textile recycling and garment disposal behaviours. Bianchi and Birtwistle's (2012) study has shown that consumer attitude to recycling is the strongest driver towards donating behaviour.

Monetary Incentives

Increasing sales of second hand clothes would help reduce the amount sent to landfill, however consumers are still accustomed to widely available low cost clothing which is often viewed as disposable (Reiley and DeLong, 2011). The findings of Joung and Park-Poaps (2013) study indicate that consumers were financially motivated in resale and reuse behaviours, such as in-store buy back schemes. Consumers may also be financially motivated to sell on garments instead of discarding, however findings by Morley et al. (2006) indicate that low quality garments negatively affected resale and reuse. It is posited that young consumers of 'fast fashion' may become discarders rather than recyclers, indicating the growth of a 'throw-away' fashion attitude.

Charitable Concerns

Joung and Park-Poaps (2013) also confirm previous studies, that donation was related to charitable concerns, and that discarding behaviour was related to convenience. Brooks (2012) highlights that clothing donors also often do not understand the final market for their donations,

in which used clothing collected by charities is retailed commercially. Brooks describes how charities are embedded into the historical culture of accepting donated clothing, and therefore dominate collection. Companies are less able to stimulate donations, although some have formed licensing agreements with charities, and collection activity in increasing in commerciality (Brooks, 2012).

Convenience

Convenience and accessibility have been noted as key to participation in recycling programmes. Higher level of participation have been recorded in communities with access to recycling programmes. When textile recycling was not offered as part of current recycling programme, consumers did not seek out alternatives as this was considered too much trouble. One survey found that people would not go more than 10 minutes out of their way to make a drop-off (Joung and Park-Poaps, 2013).

The findings of a study by Goworek et al. (2012) indicate that consumer's maintenance and disposal of clothing were influenced by their own existing habits and routines, which took precedence over sustainable practice. This indicates that respondents were unwilling to change their behaviour. Short fashion lifecycles and the low cost of clothing also fuels high volumes of consumption, with a proliferation of unwanted garment, disposal is often the most convenient option for consumers (Goworek et al., 2012; Joung and Park-Poaps, 2013)

Awareness and Understanding

Despite an increased interest in reusables and several major campaigns to change consumption behaviour (Mintel, 2009a), it has been shown that consumers often have little awareness of the sustainability impacts of clothing. A lack of awareness of the need for textile recycling and a minimal understanding of the most responsible way to dispose of textiles have been shown to common consumer issues (Morgan and Birtwistle, 2009; Goworek et al., 2012; Joung and Park-Poaps, 2013).

Morgan and Birtwistle (2009) cited Burke et al. (1978) in categorising consumers as those who simply discard products or those who dispose of them responsibly. Many study respondents of Goworek et al. (2012) felt cheap clothes to be disposable. This attitude, combined with a lack of knowledge of responsible disposal methods led to a lack of recycling amongst respondents. In a study of young fashion consumers by Morgan and Birtwistle (2009), participants stated that the awareness of the social and environmental consequences of their clothing consumption and disposal behaviour would motivate them to change their behaviour.

This finding is supported by a study by Bianchi and Birtwistle (2012) in which greater environmental awareness and consumer age are positively linked to recycling behaviour.

Recommended strategies to prevent discarding behaviour are the development of a culture of recycling in early childhood, along with an emphasis of the benefits of recycling in higher education programmes. Joung and Park-Poaps (2013) urged communicating the positive effects of textile recycling behaviour to all participants, to encourage further pro-environmental behaviour; as do Bianchi and Birtwistle (2012) who cited effective communication strategies as key to achieving sustainable clothing disposal, recommending educators, the media, charities and retailers emphasise and encourage positive recycling behaviours.

2.2.3 Adding Value

It has been acknowledged that the majority of superfluous textile items collected are exported for reuse, however there is still limited understanding of the true end destination of these items (Bartlett *et al*., 2013). Once collected, post-consumer textiles are processed and sorted; an activity requiring skilled workers to identify and separate wearable textiles, and differing properties in un-wearable textiles, ready for recycling. One such facility for handling such activity is Oxfam's Wastesaver plant, which handles over 100 tonnes of textiles a week (Waste Online, 2010). In a study by Farrant *et al*. (2010) the route of donated second hand clothing is defined hierarchically, with the best pieces being resold in western markets, lower quality items exported to Eastern Europe and Sub Saharan Africa, and the least good recycled, incinerated or thrown into landfill. The countries of sub-Saharan Africa received close to 30% of world exports of SHC in 2001. These imports carried a total value of $405 million, up from $117 million in 1990 (Hansen, 2004). The textile collecting industry is however in a state of flux, as quality is reducing, volumes are increasing, creating financial imbalance.

Considering a new t-shirt (weighing approximately 250g) cost £2.65 wholesale in 2006 (Allwood et al., 2006), and allowing for inflation, around £3.25 in 2013; with roughly 4000 new t-shirts in 1 tonne, new garments have an approximate value of around £13,000 per tonne (£13 per kg) and upwards. Bartlett *et al*. (2013) estimated that the average revenue received for a tonne of textiles is £917. Purchasing these textiles and sorting them costs a re-processor approximately £650 per tonne, leaving just £267 profit per tonne of used textiles sold. This drop in value of around 93% limits profits made from the value of these commodities, but makes them affordable to traders in countries with developing markets. Brooks (2012) describes how SHC clothes are devalued of their 'exchange-value' when they are donated by consumers. The garments contain 'latent use-value' as a product of the labour that was initially used to manufacture them, however, additional labour time (collecting, sorting, packing etc.) is required to convert this to exchange-value once again, and produce saleable commodities.

The value added through labour creates a profit for private firms, or raises funds for a charity. These returns, plus costs, are represented in the final purchase of price paid for the quantities of second hand clothing sold to importing countries, such as those in Arica or Asia (Brooks, 2012). Furthermore, the labour costs are not equivalent to the material costs of merchants' activities. Thus, surplus value, or profit, is only achieved by purchasing commodities at below market value. Value is added to collected textiles primarily by sorting and grading into specific categories, which are then sold in bulk amounts. The end products are the bales of different quality textiles available for purchase. Bartlett *et al*. (2013) describe typical sorting activity in the UK to work to between 30 to 140 grades. Major end markets include Eastern Europe, Sub Saharan Africa and Southern Asia (ibid.). As little as 3% of collected textiles are re-sold in the UK, as premium or vintage clothing, which can have a re-sale value much closer to that of new clothing. Around 75% are exported for reuse overseas, with 18% sold as recycling grades (Bartlett *et al*., 2013).

2.2.4 Exporting Second Hand Clothing to African Nations

There is often public misconception that charities will sell all donated clothes in their shops or donate the items freely to those in need in developing countries (Brooks, 2015). A lack of public awareness that clothes are sold commercially as commodities and exported abroad dominates, despite UN figures which show the UK as the second largest exporter of second hand clothing after America (Brooks, 2015). Whilst it is undoubtedly desirable for clothes and textiles to be diverted from the waste stream and immediate landfill as exported commodities, contentious issues have arisen in traditional export markets such as those in Sub Saharan Africa, which place uncertainty over the continued viability of this end market destination. For traders in African countries, the highly variable nature of Western imports of used clothing in terms of quality, cleanliness, condition, style and size mean that they take on a high degree of risk and uncertainty by relying on these products for their livelihoods. Coupled with currency fluctuations which result in increased costs, local traders in countries such as Mozambique can end up purchasing poor stock at high prices. Traders are unable to check stock quality before buying and must rely on a mixture of luck, unofficial trade relationships and bribery to even begin to ensure that they can secure appropriate stock. (Brooks, 2012).

Imports of low cost used clothing may have also contributed to the overall decline and lack of growth and development in domestic African textile and garment industries. Zambia was opened to foreign trade and repealed tariffs in 1991. Used clothing could be imported in at transportation costs only, resulting in a flood of second hand clothing entering the market. Following on from these reforms, 30,000 out of a total of 34,000 jobs were lost in Zambia's fledgling textile industry (Slotterback and Schrand, 2007). However, clear links between the

influx of second hand garments and decline of domestic African clothing and textiles industries are not so readily apparent. Liberal economic reforms such as the ending of the Agreement on Textile and Clothing in 2005, and the preceding Multi Fibre Arrangement in 1994 (Allwood et al., 2006), removed barriers not just to the import of second hand garments from the west, but also newly made low cost clothing and textiles from the far-east. Countering this disadvantage, the US African Growth and Opportunities Act (AGOA) allows unrestricted trade with America for clothing made in African factories until 2025, creating a boost to manufacturing and trade. However many practices linked to both second hand imports and the African clothing industry, such as illegal shipments practices and complex social interactions at local level remain undocumented by official channels, adding to the challenge and nuanced complexity of investigating the links between these two trends. It is clear that current trade practices subjugate Africa in the global economy, placing continued trade in contention. Development and innovation must help to create new, more viable markets for textile reuse in the UK for progress beyond traditional and declining current end-markets (Morley et al., 2009).

2.2.5 The Circular Economy

The organisation of production in terms of materials use has increasingly come under scrutiny (Livesey and Thompson, 2013). The 'take-make-use-dispose' linear economic model has been called into question in terms of resource efficiency and negative effects along the material chain. A key concept which has been put forward to mitigate the risks associated with this linear model is the circular economy. In 2014 the European Commission outlined a commitment to the circular economy and waste minimisation in a report delivered to the European Parliament (European Commission, 2014b). Most recently the European Commission withdrew this proposed legislative package of commitments, promising to update and revise the plans for later in 2015 (Confino, 2015), however organisations such as The Ellen MacArthur Foundation and WRAP are continuing to steps to convert the economy into a more circular system. Established in 2010, The Ellen MacArthur Foundation aims to accelerate the transition to a circular economy with leading circular economy thinking, education and business innovation. The Foundation asserts that innovative business models, such as those which change from ownership to usage, service and performance based payment models, will be instrumental in translating products designed for reuse into attractive value propositions (Ellen MacArthur Foundation, 2010).

The Ellen MacArthur Foundation defines the Circular economy as: '*An industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals,*

which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models.' (Ellen MacArthur Foundation, 2013a). The Ellen MacArthur Foundation (2014) circular economy model (Figure 5) shows cascading cycles of disassembly and reuse, in which short-life consumable products are largely made from biological ingredients and durable products are designed to have their technical components recycled and upgraded.

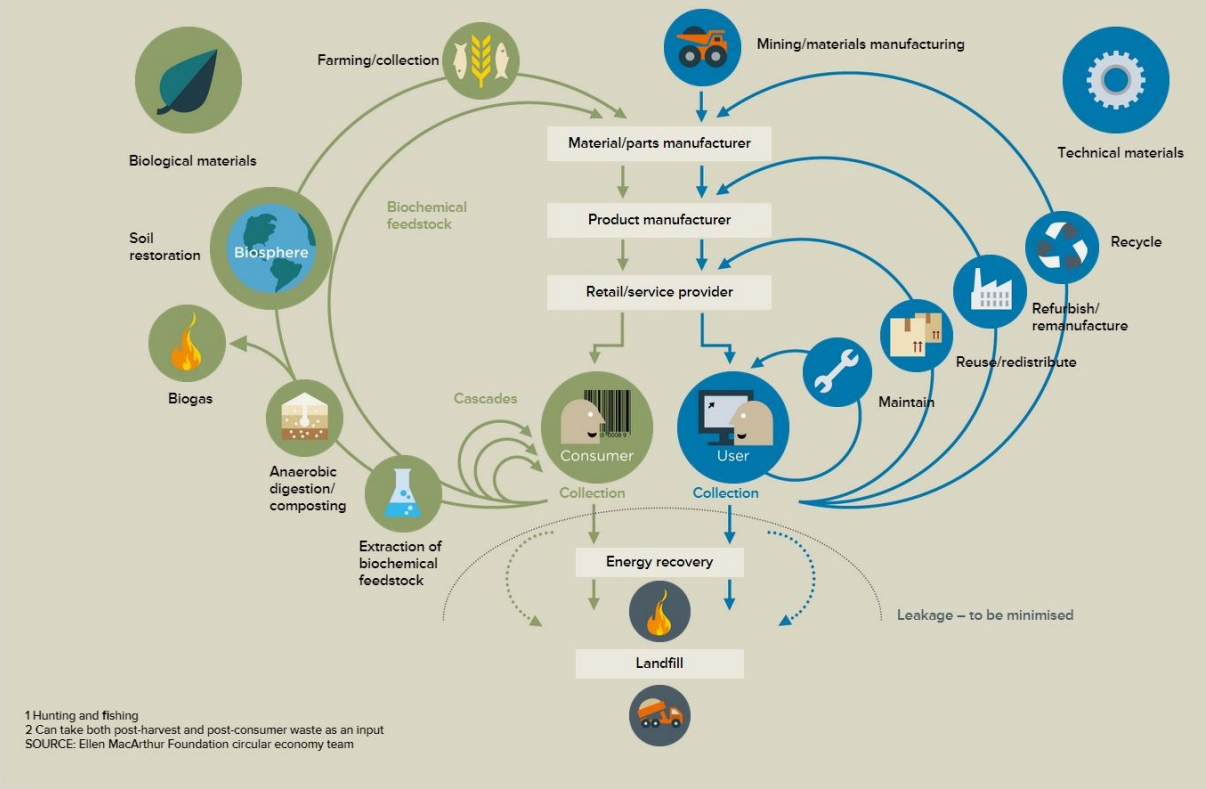


Figure 5. The Ellen MacArthur Foundation (2014) circular economy model

This concept works to link inputs and outputs and reuse as much material in the system as possible. Localisation of industrial clusters works within this system to reduce energy and transport requirements. (Livesey and Thompson, 2013). The European Commission's (2011) communication 'Roadmap to a Resource Efficient Europe' outlined the Commission's vision of an EU economy with a respect for resource constraints and planetary boundaries. The aim is for all resources to be 'sustainably managed, from raw materials to energy, water, air, land and soil.' Climate change milestones have been targeted, while biodiversity and the ecosystem services it underpins should be protected, valued and substantially restored by 2050. This has been further supported by the European Commission's (2015b) 'Circular Economy Strategy', which is aimed at developing a common and coherent framework at EU level to promote the circular economy. Actions proposed to put this into practice are; defining waste and recycling targets, improving the implementation of waste legislation and tackling

specific waste challenges related to significant loss of resources or environmental impacts. Key points for circular economy textiles within these proposals include banning the landfill of recyclable plastics by 2025, further promoting the development of markets for secondary raw materials and setting a resource efficiency target which would increase productivity. (Euratex, 2014).

In the UK WRAP (2010) has also outlined a set of actions to the sustainability of clothing and textiles in the circular economy as shown in Figure 6. A strong economic case for reuse describes how recovering just 10% of the £238 - £249 million of re-usable or recyclable textiles which were discarded through kerbside residual waste collections could generate a potential sales value of almost £25 million. Through the Sustainable Clothing Action Plan (SCAP), WRAP's main actions to reduce the waste, water and carbon footprints of clothing include research into lower impact fibres, design for longevity and lower impact, supply chain efficiency and consumer information on use phase, garment care practices and recycling. Improved collection strategies to divert textiles from landfill and further research into recycling technologies aim to bring together industry, government and third sector partners to reduce lifecycle impacts and deliver tools and guidance to meet circular economy objectives. WRAP's (2010) textiles circular economy model shows the interlinking stages of materials, production, design, retail and use followed by the circular economy strategies of collection, reuse, repair and recycling.

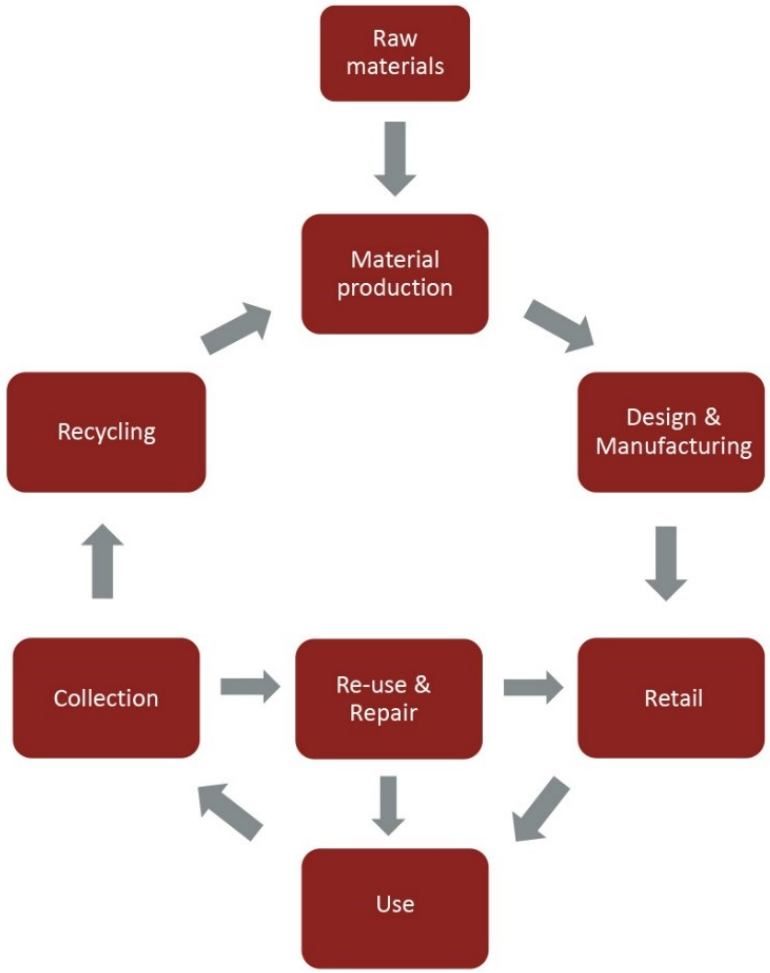


Figure 6. Textiles Circular Economy

(WRAP, 2010)

Both the WRAP and the Ellen MacArthur Foundation (EMF) models show consideration of each stage of material flow and the links between them. This highlights the cascading reuse options to keep existing materials in productive use for longer, for maximum lifecycle savings. Both models aim to reduce the input of new materials into the system and reduce the amount of material that ends up as waste in landfill or incineration. Limitations of the EMF model are the omission of 'design' and 'communication' as explicit stages or flows in the circular economy. As established by Spangenberg and Lorek (2002), more than 80% of the environmental impacts of a product are determined during the design phase. Because of this it is recommended that sustainable design processes are woven into existing practices to ensure they become embedded into organisational culture (Murray, 2013). Both the WRAP and EMF model also omit communication as a stage or flow in the circular economy, showing only material feedback loops. Often organisational structures in the garment design and production industry lack adequate communication between stages, which can also adversely affect communications outside the organisation, necessitating changes and improvements to

communication throughout the product development process (Carr and Latham, 1994). Communication and information flows are necessary between each and every stage of a successful circular economy, and it is of key importance that all stakeholders can access a two way dialogue to create full understanding and transparency.

2.2.6 Sustainable and Innovative Business Models

Business Model Frameworks

Business model frameworks could be said to detail the core aspects of a company, which Slywotzky (1996) describes as encompassing the 'totality of how a company selects its customers, defines and differentiates its offerings, defines the tasks it will perform itself and those it will outsource, configures its resource, goes to market, creates utility for customers, and captures profits'. Such a framework would also involve a combination of internal factors, such as 'market analysis, products and services promotion, development of trust, social influence and knowledge sharing, and external factors such as competitors and technological aspects' (Ferri et al., 2012). It is in effect, the reasoning behind why and how a business organisation operates in the way that it does to deliver products and services and derive value from this, as well as meeting social responsibilities. In fact, Al-Debei & Avison (2010) define a business model as 'an abstract representation of an organisation'. Osterwalder & Pigneur (2010) define a business model as 'the rationale of how an organisation creates, delivers and captures value'. This can take the form of a conceptual, graphical or textual representation of all core structural, collaborative and economic provisions created by an enterprise to meets its aims, including details of the products and services offered. To this end Al-Debei & Avison (2010) offer a framework consisting of four main dimensions: 'Value Proposition, Value Architecture, Value Network, and Value Finance.'

Value Proposition: A description of the products and services offered, who they are targeted at, relevant market knowledge of this sector and how value is created for these customers.

Value Architecture: The organisational structure of a business, including technology and infrastructure.

Value Network: Partnerships and collaborations within the organisation and between organisations.

Value Finance: Costs, pricing and revenue streams.

While comprehensively listing the internal components necessary for a business model, Al-Debei & Avison's (2010) framework does not incorporate external factors such as competitive

threats and risks, or aspects such as social responsibility. These aspects could be said to be part of business policy formulation (Wild, 1997).

Wild (1997) offers a set of four steps for an organisation in the formulation of business policy:

1. The identification of opportunities, threats and associated risks.
2. The assessment of strength and weaknesses (e.g. material, financial, technical, personnel).
3. The main values and aspirations of stakeholders and management.
4. The major social responsibilities and objectives.

Al-Debei & Avison's (2010) framework and Wild's (1997) policy formulation guidelines could also be said to be encompassed in Osterwalder & Pigneur's (2010) business model canvas, which consists of nine building blocks that show the logic of how a company intends to make operate successfully, shown in Figure 7.

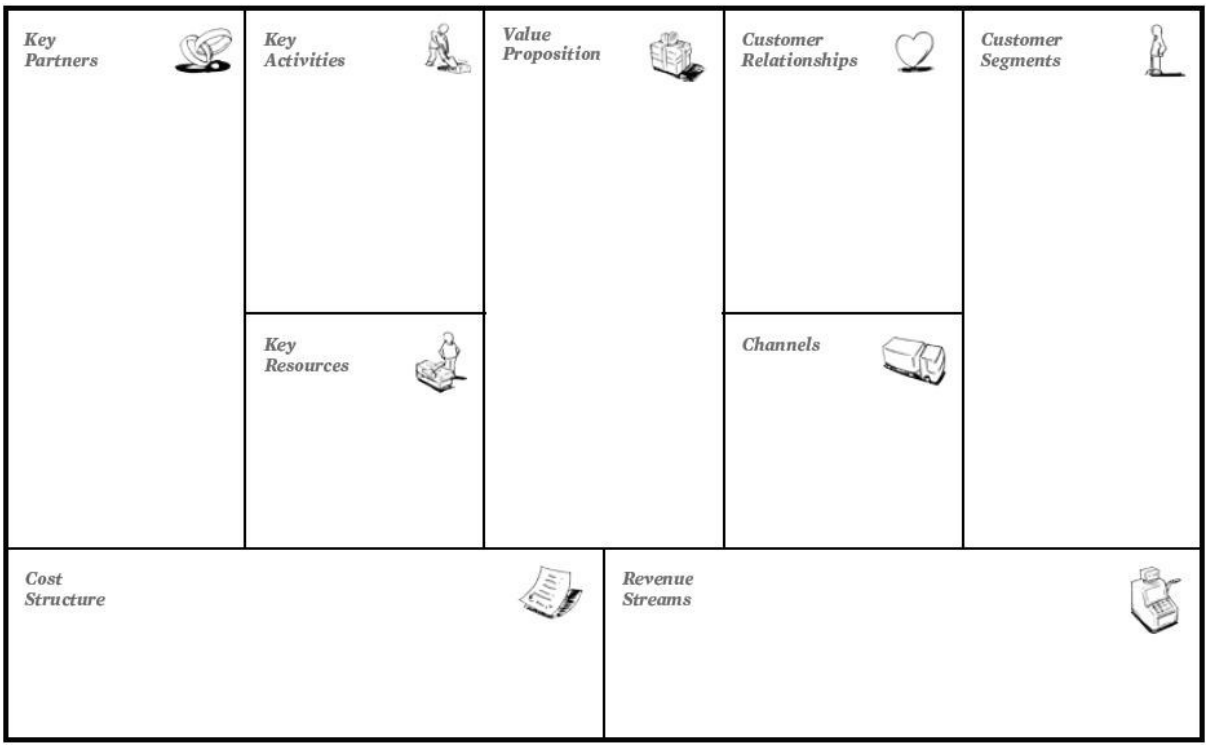


Figure 7. The Business Model Canvas (Osterwalder & Pigneur, 2010)

'Customer segments' defines who the target audience for products and services. This may be businesses or individuals. 'Value propositions' are the products and services created for each target group. 'Channels' are the methods used to deliver information, products and services to the chosen groups. 'Customer relationships' define the way each group or segment are

connected with the business. Different ‘revenue streams’ are also generated from each customer segment. ‘Key resources’ can be physical, human, financial or intellectual, and represent the most important assets necessary for the business model to function. ‘Key activities’ are the actions a company must undertake to function successfully. ‘Key partnerships’ describe the network of suppliers, collaborators and partners which enable the key activities and the cost structure includes all costs incurred. (Osterwalder and Pigneur, 2010). Social responsibility is not directly represented in this canvas, however it could be argued that it should be present in each and every one of the nine building blocks as an overarching policy for the entire organisation, in the same way that Gwilt (2011) shows sustainable design strategies as parallel lines of thought to the haute couture design and production phases in Figure 8. The strategies are present and interchangeable throughout the whole of the design and production cycle.

Figure 8. Linking Sustainable Strategies with the Process of Design and Production

(Gwilt, 2011)

In this way, a circular economy fashion business model framework is an adaptation and development of each of the aforementioned techniques used in designing a business model. The framework details the reasoning behind why and how a circular economy fashion business would operate to deliver closed-loop products and services and derive value from this, as well as meeting social and environmental responsibilities. As an alternative to the linear 'take-make-use and dispose' model of consumption, the circular economy seeks to mirror natural lifecycles, in which waste becomes nutrients or source material for new growth (Andrews, 2015). Although established businesses with a significant market share will be best placed to drive circularity into the mainstream through horizontal and vertical integration, new challenges and opportunities will open up new ways of doing business. Convincing consumers to adopt new habits and change their perceptions will be key to the success of circular economy business, as will incorporating new businesses into the value chain, along with greater transparency, flow of information and strong value chain networks, in order to maximise the reuse potential from circular resource flows (Ellen MacArthur Foundation, 2013b). Innovative circular economy business models proposed by the EU collaborative project REBus and WRAP are as follows (WRAP, 2015a):

'Product Service System

Providing a service based upon delivering performance outputs that are linked to products or services. Products could also be designed for disassembly, remanufacture and reuse.'

'Dematerialised services

Providing a service that offers product benefits where a 'physical' product does not exist at all at the point of use. This model changes consumption patterns and delivers potential material savings by not producing a physical product for consumers.'

'Hire & leasing

Long-term hire and leasing of products can deliver a longer term approach to product durability, with longer service life, lower maintenance load and lower use of materials and CO_2.'

'Collaborative consumption

Rental of products between members of the public or between businesses. Generates an income for the product owner and provides cheaper access to a product for the renter. Can also be non-income based peer-to-peer online and/or offline exchange and reuse.'

‘Incentivised return & reuse

Encourages customers to return used items for an agreed value. Customers gain value for unwanted items and return products via a convenient system. Collected products are refurbished and sold for reuse on appropriate markets.’

‘Asset management

Internal collection, reuse, refurbishing and re-sale of used products. Reduces the quantity of raw materials required to meet the market demand.’

‘Collection of used products

Collection by a service provider to ensure products/ materials are passed on to an appropriate reuse system.’

‘Long life

Products are designed to have a long life time with durability, reducing consumption.’

‘Made to order

Production is managed to minimise material requirements and avoid potential losses from over-stocking products.’

Of these business models, the processes and practices of upcycling, reuse and recycling fit into almost all models, with opportunities presented in collection, remanufacturing and resale, repairs and servicing, durable design, incentivised returns, longevity and bespoke ordering.

In a report which evaluated the viability of such garment sector business model innovations which are working to divert waste from landfill; five models were investigated (Buttle et al., 2013):

Model 1

‘Retailers or manufacturers providing repair and upgrading services for their own garments.’

Model 2

‘Retailers providing radical new large-scale leasing services, such as for infant apparel.’

Model 3

‘Retailers providing radical new large-scale services for one-off hire, such as for formal wear.’

Model 4

‘Retailers offering a collection and re-sale section for pre-owned, re-worked and re-conditioned own-brand garments within their store.’

Model 5

‘Peer to peer exchange.’

In this study by WRAP, the model which provided the quickest payback on the investment needed for initial set up was Model 4, the re-sale of re-worked and re-conditioned fashion

items for an existing retailer, a positive indication for large scale upcycling to be integrated into mainstream fashion retail.

2.2.7 Sustainable Design Strategies

In order to successfully integrate circular economy principles into new and existing business models, design strategies must necessarily direct ethically and environmentally driven decisions throughout the entire product development and supply chain process (Luttropp and Lagerstedt, 2006). One such strategy is 'ecodesign' or 'design for the environment', which balances benefits to the consumer against environmental impacts. To guide the implementation of ecodesign, Luttropp and Lagerstedt (2006) created ten 'golden rules' which address all stages in the lifecycle of a product. These rules are as follows:

1. 'Do not use toxic substances and utilise closed loops for necessary but toxic ones.'
2. 'Minimize energy and resource consumption in the production phase and transport through improved housekeeping.'
3. 'Use structural features and high quality materials to minimize weight in products if such choices do not interfere with necessary flexibility, impact strength or other functional priorities.'
4. 'Minimize energy and resource consumption in the usage phase, especially for products with the most significant aspects in the usage phase.'
5. 'Promote repair and upgrading, especially for system-dependent products. (e.g. cell phones, computers and CD players).'
6. 'Promote long life, especially for products with significant environmental aspects outside of the usage phase.'
7. 'Invest in better materials, surface treatments or structural arrangements to protect products from dirt, corrosion and wear, thereby ensuring reduced maintenance and longer product life.'
8. 'Prearrange upgrading, repair and recycling through access ability, labelling, modules, breaking points and manuals.'

9. ‘Promote upgrading, repair and recycling by using few, simple, recycled, not blended materials and no alloys.’

10. ‘Use as few joining elements as possible and use screws, adhesives, welding, snap fits, geometric locking, etc. according to the life cycle scenario.’

Closed loop systems, upgrading, repair and recycling are emphasised, and design decisions affecting these end-of-life stages are accounted for through the use of simple materials and fewer joining elements, however Gwilt (2011) shows sustainable design strategies that account for the ease of disassembly as well as end-of-life strategies. Gwilt (2011) also accounts for the social well-being of individuals throughout the supply chain, including users, producers and workers. These strategies, as shown below, are as follows:

‘Design for end-of-life strategies’

‘Design for disassembly’

‘Design for waste minimisation’

‘Design for social well-being’

‘Design for slower consumption’

‘Design for user participation’

‘Design for product service systems’

Gwilt's (2011) additional thinking has the advantage of a transformational approach to the whole design process, rather than incremental technical innovation, as described by Spangenberg et al. (2010). In a comparison between ‘design for sustainability’ and ‘design for the environment’ Spangenberg et al. (2010) differentiate the sustainable design approach as being precautionary rather than preventative. Instead of re-designing products and services, design for sustainability questions the necessity and existence of the products and services in the first instance, then seeks to find alternative methods of addressing the needs of individuals, while also accounting for all lifecycle stages and considering both technical and social innovations. In this way circular economy fashion design can address issues of over-consumption, cyclability and use-phase impacts as well as ethical concerns such as workers’ rights, toxic pollution and fair trade. Circular economy fashion designers can use the strategies developed by both Luttropp and Lagerstedt (2006) and Gwilt (2011) to consider approaches outside of basic functionality and cost, such as remanufacturing and upcycling (Ijomah et al., 2007)

2.2.8 Upcycling

Value streams for collected post-consumer textiles continue to be analysed within the global challenge to develop and employ commercially viable, yet ethical and sustainable strategies within the fashion industry. Upcycling is an existing strategy applicable to fashion production, with discarded materials used to design and create higher value products, keeping them in productive use for longer. A number of very small, niche upcycling enterprises have emerged in the UK and Europe. These brands have succeeded in creating stylistically relevant and commercially successful fashion styles utilising waste textile materials. The advantages of scaling these enterprises up are not only environmental, but also economic and social, thereby creating sustainable and innovative business models for UK led fashion production.

The concept of reducing textile waste is pertinent to a circular economy, and continues to remain key to product lifecycles and sustainability. Farrant *et al*. (2010) stated that 'clothes are often discarded when much of their potential lifetime is left'. Woolridge *et al*. (2006) have quoted figures from the Salvation Army Trading Company Ltd that conclude that when clothing is disposed of, it still has at least 70% of its useful life left. This confirms that discarded clothing and textiles from consumers and industry can be seen as point of origin or supply, rather than a form of waste, when viewed in terms of sustainable supply chain management (Svensson, 2007).

Fletcher (2008) asserted that recycling and reuse techniques are often criticised for only focusing on the optimisation of one small part of an inefficient industrial system; however while society is working towards developing zero waste strategies, these changes will not become common place or be implemented overnight. Upcycling is fundamentally a transition strategy that works on optimising the waste systems of society, while it moves towards developing more socially aware and less energy intensive methods of production (ibid.). Upcycling takes into account all stages in the lifecycle of clothing, from production and manufacture, to use and disposal, and reuse as source material for further production. It categorically offers an environmentally friendly, low energy alternative to traditional production and manufacturing techniques and would enable the industry to develop more sustainable production methods.

It is argued that in utilising discarded waste textiles as a source material, the process of upcycling creates products of equal or higher quality, use and value. Product developers and designers must now take greater responsibility for the problems presented by inefficient and unsustainable systems, by creating ways of enhancing effectiveness. Sustainable design advocates Braungart and McDonough (2002) illustrated an early example of upcycling, in which Henry Ford's Model A trucks used the packing crates they were shipped in as their floorboards. Cannell (2000), underscored the principle of Michael Braungart (author of Cradle

to Cradle), that there should be focus on designers to take responsibility for the environmental impact of the products they create. Armstrong and LeHew (2011) also affirmed that decisions made by designers and product developers about their approach greatly impacts sustainability and product lifecycle; and Gam et al. (2011) emphasise the role of the designer in addressing the sustainability problems caused by the many tonnes of textile waste.

The concept of upcycling presents an opportunity for designers to lead the way forward, in utilising the many tonnes of textile waste produced to satisfy the constant demand for new fashion, while technological developments advance towards more sustainable methods of production. Consumer appetite for newness has led to the current situation of over-consumption and over-production, resulting in waste, pollution and harmful emissions, as well as a depletion and exploitation of natural resources. High volumes of textile waste have been viewed as the end of the line for those discarded garments, however, the fashion industry could be utilising this resource to create well designed and sustainably sourced upcycled clothing.

The current economy can be described as a linear system, in which products are made and then discarded, often into landfills, causing environmental problems such as carbon emissions and toxic pollution. Creating a circular economy for the UK fashion and textiles industry, in which waste textiles are cycled back to become source materials for new garments, would provide environmental savings. Research has shown that discarded garments still have a significant portion of their potential useful life embodied at the time of their disposal. In rectification, upcycling seeks to optimise the end-of-life processes of an otherwise inefficient industrial system. Research into the use of waste and recycling strategies to manufacture new products would reduce dependence on scarce virgin materials, limiting both harmful emissions, and consumption of resources. As a design based waste solution, upcycled fashion production diverts waste from landfill and utilises it as a primary source material for new fashion products, with a higher retail value than traditionally recycled goods.

Upcycling takes into account all stages in the lifecycle of clothing, from production and manufacture, to use and disposal, and reuse as source material for further production. It categorically offers an environmentally friendly, low energy alternative to traditional production and manufacturing techniques and would enable the industry to develop more sustainable production methods. In relating the dependencies between different levels in the supply chain, from the point of origin to consumption; the conceptual framework of Sustainable Supply Chain Management (SSCM) can be applied to upcycling (Svensson, 2007). Hitherto application of this concept, traditional supply chains, such as those regularly employed by the fashion and textile industry, rarely took into account interconnected economic, ecological and social

aspects of business practice, or multi-directional dependencies of all activities, actors, and resources on operational, tactical, and strategic levels. These would normally be regarded as separate and unconnected supply chains (Svensson, 2007). In SSCM, Svensson (2007) observes and illustrates the end point of the supply chain as a new point of origin, as shown in the empirical example of the international clothing and consumer market in Figure 9.

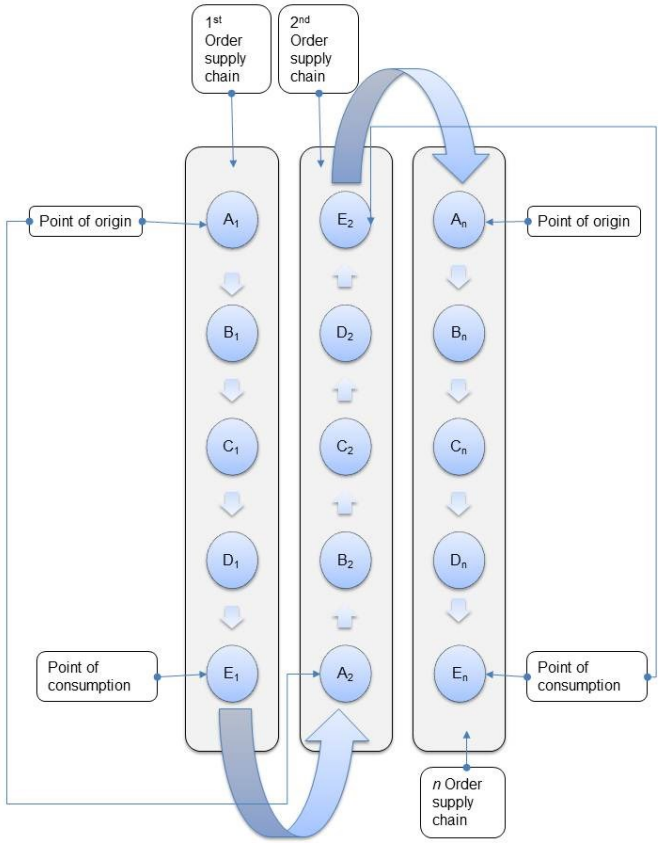


Figure 9. SSCM - First, Second and n-order Supply Chains

(Adapted from Svensson, (2007)).

In the example in Figure 9, the point of origin for the clothing industry is the fashion company, where decisions are made on product specifications by designers and marketing (A1). This is followed by manufacture (B1), distribution to wholesalers (C1), distribution to retailers (D1), and purchase by consumers (E1). This is a first order supply chain. Here Svensson (2007) applies the example of the Swedish second hand clothing market as point of origin, where consumers (E1) donate unwanted items to charity organisations (A2). This activity is often regarded as outside the current supply chain, despite consumer behaviour and business practice continuing beyond this point. These clothes are baled and sold in bulk at places such

as Gikomber market in Kenya (B2), where clothes are bought by wholesalers and retailers to be sold second hand at places such as Adams market in Kenya (C2), where specific styles of clothing are purchased by retailers for the Nairobi market (D2). Retailers also sell to other merchants transporting the clothes to other cites (E2).

In this way SSCM comprises of first and second order supply chains, which may then become n-order supply chains (third and fourth etc.) as non-renewable resources become scarcer. Future first order supply chains may use renewable and recyclable resources, which will come from n-order supply chains. An example of a third order supply chain in the clothing industry would be a textile waste management chain leading to recycled or upcycled products.

In the UK, small, independent upcycling designers, successfully making use of waste textiles, are tapping into a largely under-utilised source of supply for the fashion industry. These upcycling businesses are often small design-maker led enterprises, and are producers of niche products that rely on local sales and customers. Post-consumer waste is often used as the source material and although there has been some success translating the products they make to high street retail, the greatest success of translating upcycling to main stream retail would appear to be through the use of post-industrial waste, as these textiles provide greater quality and consistency as source materials. In utilising key research and design led production, it is feasible to develop this niche enterprise into a large scale industry with increasingly significant environmental savings.

2.3 Circular Economy Fashion and Textiles Business Models

Osterwalder & Pigneur (2010) define a business model as the rationale of how an organisation creates, delivers and captures value. The interpretation of value can be extended to include societal and environmental value, such as creating and capturing value from the waste stream through new value propositions (Kant Hvass, 2016). Osterwalder & Pigneur (2010) demonstrate how a business model can be represented through the nine building blocks of the ‘Business Model Canvas’ as shown in Section 2.2.6. In this section, three circular economy fashion and textiles business models are proposed. The business model canvas has been used to detail the nine building block elements which comprise each of the business models for post-consumer textile collection, fashion upcycling and a textile resource mapping database.

2.3.1 Post-Consumer Textile Collection for a Circular Economy

Customer segments
Export markets (Europe, Asia, and Africa)

Domestic reuse – second hand clothing stores, vintage wholesale, resale, repair, reconditioning

Fashion design and apparel manufacture, upcycling and remanufacture

Textile design and manufacture, recycling and reprocessing

Wiper manufacturers

Value propositions

Sorted and graded bales of textile for reuse, remanufacture, upcycling, recycling and reprocessing – categorised by garment type and quality as well as by fibre type and composition

Vintage and bulk sales to individuals – kilo sales etc.

Channels - Trade associations, online networks, company websites

Customer relationships - Dedicated personal assistance

Revenue streams - Asset sales - Dynamic pricing based on market conditions

Key resources

Physical – Sorting plant facilities, vehicles, textile banks, collection networks,

Intellectual – Branding, charity licensing and partnerships, client databases

Human – Sorting plant staff, vehicle drivers, administrative and managerial staff

Financial – Credit lines for clients

Key activities

Textile collection, sorting and grading.

Distribution, sales and retailing

Maintenance of an up to date stock inventory and traceability information

Key partners

Charities, retailers, local authorities, cash for clothes shops, independent collectors, and waste management companies

Residential communities, public organisations (schools, colleges, universities, hospitals, care homes), local businesses

Cost structure

Fixed costs – salaries, rent, sorting plant facilities

Variable costs – collection costs, energy use, labour / wage costs, distribution

A business model for post-consumer textile collection in a circular economy fashion and textiles system must necessarily be supplied from a wide range of sources in order to provide the greatest number of options to donators and divert the largest volume of textiles from the waste stream. These sources include textile banks, door-to-door collections, surplus charity shop stock and cash for clothes shops, as well retailer take back schemes and trials of new collection methods such as appointment based door-to-door collections, localised residential collection schemes and community based initiatives. Customer segments include export markets in Europe, Asia and Africa, however as these markets are declining in value (WRAP, 2016c), additional markets must be sought to maximise the reuse, recycling and upcycling of collected textiles. Domestic reuse markets such as second hand and vintage clothing, plus resale of repaired and reconditioned garments are supplied by the textile collection business model. To boost domestic reuse sales, engaging with consumers through events which emphasise the style and fashionable qualities of second hand clothes have proven to boost both sales and donations, as a case study with WRAP and Cambridgeshire and Peterborough Waste Partnership shows (WRAP, 2012b). More recently the Charity Retail Association (CRA) created the ‘Style Me in Seconds’ series of events and toolkit to assist members in creating a positive image of charity shops as fun and interesting for younger shoppers (The Charity Retail Association, 2017), along with an online social media platform for shoppers to share the outfits they created from charity shop purchases (Style Me in Seconds, 2017). Through collaborative

partnerships such as work between TRAID and the CRA's Style Me in Second campaign to promote reuse as a stylish and affordable option, textile collectors will be able to boost domestic reuse through the use of targeted and visually stylish communications.

For a collector working directly with a fashion retailer to re-supply own brand items for 'pre-owned' sale, it was found that financial payback and waste savings were possible within a relatively quick period (Buttle et al., 2013). Take-back, sorting and re-supply partnerships between fashion retailers and post-consumer textile collectors will be an essential element to the functioning of this circular economy business model. Collected textiles are also supplied for fashion upcycling and textile recycling and reprocessing purposes (Payne, 2015; Sinha et al., 2016). The challenge for collectors lies in providing and promoting these source materials in consistent quality and quantity for mass production purposes. To facilitate supply it will be necessary to make traceable and up to date inventory information available to both the fashion and textile industries, for designers, producers and recyclers. Products provided must be sorted into increasingly specialised grades, by fibre composition for textile recycling purposes as well as quality, quantity and type for fashion upcycling. Economic value will be found keeping items in productive use for longer in a wider range of end markets, including greater domestic reuse and repurposing (European Commission, 2014a). Environmental value will be found in diverting more resources from the waste stream, including the recycling of low grade textiles (Farrant et al., 2010; Michaud et al., 2010). Social value will be found in an increased provision of manual and skilled employment positions with fair wages and good working conditions.

Channels for communicating with each customer segment include trade associations which list suppliers of textile resources, such as the Textile Recycling Association (Textile Recycling Association, 2017), online networks such as The Textile Institute (The Textile Institute, 2017) and company websites. Customer relationships for textile collectors take the form of what Osterwalder & Pigneur (2010) describe as dedicated personal assistance, in which a company representative is able to focus specifically on each individual client at a time. The emphasis is on human interaction and a relationship developed and maintained over a long period of time. Clients are valued and often collaborative co-creation of value propositions take place, in which clients visit the sorting plant to specify exactly the type of garments or textiles they require. Revenue streams in this business model take the form of asset sales of physical products (Osterwalder and Pigneur, 2010), in this case bales of sorted and graded textiles. These revenues are recurring as a result of dedicated customer relations focusing on individual client needs. Pricing of value propositions for each client are dynamic and based on current market conditions, negotiation, current supply and demand and competition (Osterwalder and Pigneur, 2010). Key resources are categorised as physical, intellectual,

human and financial by Osterwalder & Pigneur (2010). For the textile collection business model key physical resources include the sorting plant, where collections are delivered to, sorted, graded and baled into distinct product quantities for export and resale, sorting plant machinery such as conveyor belts and forklift trucks, vehicles for collection plus the textile banks and collection networks which enable supply. Intellectual resources include company branding and the licensing of charity insignia for collection partnerships plus the database of clients the company supplies. Human resources include sorting plant and vehicle staff, as well as administrative and managerial staff and financial resources include credit lines for clients.

The key activities for the business model are the collection, sorting and grading of post-consumer textiles, followed by distribution and sales and the maintenance of up to date inventory and traceability of supplies. Activities are enabled by key partnerships with suppliers such as charities, retailers, local authorities, cash for clothes shops, independent collectors, and waste management companies. An example of a local authority and waste management company working in partnership is given in a case study into kerbside collection for WRAP by Southend-on-Sea Council and Cory Environmental Municipal Services Ltd (WRAP, 2009). Through this partnership ~200 tonnes of textiles per year were collected alongside mixed recycling direct from households over the 7 years of the study, diverting textiles from landfill and creating increased revenue for the collector. Collectors can also work with residential communities, public organisations (schools, colleges, universities, hospitals, care homes) and local businesses to collect textiles on behalf of a charity or community fundraising initiative, such as the Bag2School fundraising company (Bag 2 School, 2017). The scheme is run by textile collectors Next Best Clothing Ltd to collect unwanted clothes and textiles from schools and businesses. Working in this way creates benefits for both sides of the partnership in terms of better quality items for collectors and funds raised for charitable causes for the schools and businesses participating. The cost structure for the collection business is comprised of both fixed and variable costs. Fixed costs include salaries, rent and sorting plant facilities and variable costs include collection costs, plus overhead costs such as energy use, wages and distributions.

2.3.2 A Circular Fashion Brand

Customer segments

18 to 34 year old female fashion shoppers

35 years plus female fashion shoppers

Value propositions

Sustainably produced fashion utilising reclaimed materials and recycled fabrics

Pre-owned retail of own brand products

Fashion forward styles and competitive price points

Products designed to be re-useable and recyclable through material choices and supply chain interconnectedness

Transparency and traceability information provided online

Incentivised take-back schemes for unwanted end-of-life garments

Online community building through social media to enable and encourage alternative forms of sustainable consumption with collaborative partnerships

Local events to engage with individuals through sustainable consumption practices – swapping, repair and mending, making and personal styling

Channels

Online through brand website, social media, fashion blogs, web based fashion editorial

Local community events and in-store collaborative events with larger retailers

Wholesale supply to larger high street fashion retailers as a concession brand

Pop up shops in larger high street retailers

Customer relationships

Online personal assistance, social media networks and communities, web-based opportunities for co-creation

Revenue streams

Asset sales plus possibilities for subscription, lending, renting, leasing, resale of used / returned items, service system fees (repair, alterations, customisation). Fixed menu pricing and transparency for all stakeholders through web based pricing breakdowns.

Consultancy, training, teaching, curating, public speaking, research fees.

Collaborative design and production projects.

Key resources

Physical – Design studio, workshop / studio / factory, sewing machines and manufacturing equipment

Intellectual – Branding, garment designs

Human – Design and studio staff, management staff, sales and promotion staff, a network of makers and artisans connected to production

Financial – Finance for production and promotion prior to sales and distribution

Key activities

Research and sourcing of reclaimed materials, sustainable textile choices and recycled and recyclable options

Design, production, promotion and communication of a sustainable fashion collection

Maintaining a brand website and social networks for sales and communication

Reverse logistics for returned and donated items

Online and offline consumer engagement

Key partners

Textile collectors, local garment factories, local textile mills, recycled fabric producers, local makers and artisans, academics and researchers, sustainable fashion brands, fashion shows and networks, media and press, larger mainstream fashion brands, design consultancies, web based business networks, platforms and databases, local communities, social enterprise groups, waste and resource management programmes and projects, circular economy groups, local councils, charities, NGOs, educational institutions, trade associations and research institutes.

Cost structure

Fixed costs – salaries, rent, design and production studio facilities

Variable costs – production costs, energy use, labour / wage costs, distribution, communication and promotion costs

For a fashion brand operating in the circular economy, both open and closed loops of production ensure that materials are kept in productive use for longer. Fast and slow cycles of fashion can be catered for if full circularity is designed in from conception. A successful communication strategy identifies the audience to target and the most effective channels of communication for the desired audience. Products are designed for multiple reuse options and recyclability. Customer engagement with end-of-life returns is incentivised, and the resale of own brand pre-owned products provides more affordable options for a wider range of customers. In an examination of leading Swedish fashion brand Filippa K, the retailing of both new and used styles create a value proposition for consumers which offers flexible prices for a range of premium products, creating a greater range of affordable options (Kant Hvass, 2016). Value propositions are strengthened through engagement with an online and offline fashion community and include service based options such as repair and personal styling, plus community and collaborative consumption options such as clothes swaps and workshops in municipal, residential and retail locations. These events also provide a channel of communication to engage individuals with sustainable consumption practices and with the brand (Albinsson and Perera, 2012; McLaren and McLauchlan, 2015).

Wholesale supply as a concession brand in larger high street retailer enables circular fashion to become more integrated into the mainstream, in order to communicate its message to a wider audience (Beard, 2008). Pop up shops in larger retailers also enable the brand to drive further awareness and support growing sales (Mintel, 2016d). Customer relationships for a circular fashion brand go beyond the motivation for sales, customer acquisition and customer retention and aim to engage individuals with more conscientious consumption choices, alternatives to further consumption and transparent information on the supply chain traceability of the brand and the fashion industry (Han et al., 2016). Relationships are highly engaged and based on personal assistance through human interaction (Osterwalder and Pigneur, 2010), either online or offline, social media networks and community and in-store event interaction. Web-based opportunities for co-creation allow customers to give feedback on products and make suggestions for improvements and customisation, creating a more personal and engaging service. An extended consumer perspective enables a circular economy brand to remain engaged with its customers throughout a product's lifecycle to

provide information and resources for purchase, use, reuse, recycling and take-back (Kant Hvass, 2016). Revenue streams are product, service and user orientated, and includes sales of new and used fashion items, plus repair and styling services and user engagement events and online resources. Asset sales are complemented by additional revenue streams in consultancy and education, plus design and production collaborations with larger brands.

The key resources necessary for the circular brand to function are physical resources such as a design studio and production facilities, intellectual resources such as branding and design, human resources such as design, management, promotion and production staff and artisans, and financial resources for promotion and production prior to sales and distribution. Key activities of the brand are research and sourcing of reclaimed, recycled and sustainable materials which can be reused and recycled multiple times. Manufacturing is guided by ethical choices and all supply chain information is communicated through the brand website. Maintaining the content and functioning of the website is also a key activity which initiates both online and offline consumer engagement. Through communication, engagement, and incentives consumers are directed towards returning used and unwanted items for reuse, resale and recycling. Key partnership are central to enabling these activities to take place, and include links between suppliers, producers, makers, education, research, media, brands, websites, communities, industry bodies, and networks of individuals, consumers and businesses. Partnerships with textile collectors, recyclers and reprocessors are essential in sourcing materials for reuse and recyclable designs, and collaboration with a collector to sort and possibly clean items for resale will be necessary. Links with larger retailers enable engagement events and collaborative design projects to take place and partnerships with academia enable the brand to take part in and access the most up to date research on sourcing, supply chain decisions, communication and consumers. The cost structure for a circular fashion brand includes both fixed and variable costs. Fixed costs include salaries of permanent staff, rent on design and production premises and manufacturing equipment costs. Variable costs include production costs, energy use, wage costs, distribution and communication and promotion costs.

2.3.3 Textile Resource Mapping Database

Customer segments

Fashion design, production and retail

Textile design, production and sales

Education

Recycling and reprocessing industries

Textile collectors, sorters and graders

Charities and NGOs

Local councils, governments, waste management companies

Value propositions

Online textile resource mapping database showing where textiles are available for reuse, recycling and reprocessing. Quantities, quality, location and fibre composition data provided in real time mapping.

Channels

Online resources – convenient and user friendly platform

Accessible to businesses and organisations

Customer relationships

Self-service / online business community / co-creation, personal assistance options

Revenue streams - Subscription fees, usage fees, brokerage fees - Fixed menu pricing

Key resources

Physical – Administrative office and IT support centre

Intellectual – branding, web platform design, database

Human – Administrative and managerial staff, IT support staff, web designers

Financial – Online set up and maintenance costs, online capacity building and maintenance

Key activities

Online textile sourcing platform for suppliers and buyers

Reporting and dissemination of resource reallocation data

Key partners

Fashion design, production and retail

Textile design, production and sales

Educational institutions, research and academia

Recycling and reprocessing industries

Textile collectors, sorters and graders

Charities, NGOs

Online business networks, trade associations

Local councils, governments, waste management companies

Media and press

Cost structure

Fixed costs – Central office head quarters, salaries, IT support

Variable costs – Web design and branding, online set up and maintenance, advertising and promotion

A circular economy textiles database enables sourcing for reuse, recycling and reprocessing applications by creating a platform to map the location, availability, quantity, quality composition and characteristics of resources globally. The platform and data base would work to prevent textile waste by transforming it into a resource, reducing the consumption of new textiles, prolonging the lifespan of existing products and enabling the recycling and reprocessing of textiles which can no longer be used for their original purpose (Tojo et al., 2012). Customer segments for this platform include both suppliers (factories, mills, production facilities, retailers, textile collectors, sorters and graders, charities and NGOs plus local councils, governments and waste management companies) and buyers (fashion and textile design, production, retail and sales, educational institutions, recycling and reprocessing industries) of textile resources. The value proposition created is an online platform to connect

suppliers and buyers of textile resources through a convenient and user friendly interface, accessible to businesses and organisations. The environmental value of the database will be to keep material in productive use for longer, and the data collected through the real time mapping platform will also be of value to the research and development of circular economy goals to industry and academia. In the UK alone, a potential of £25 million could have been generated in sales of textile resources which were instead discarded into residual waste collections (Bartlett et al., 2013). Channels used to communicate with both buyers and suppliers who would use the database will be through online means. Users of the platform create accounts to buy, sell or donate textile resources and collection services to divert textiles from the waste stream. Customer relationships are self-service as users list their available resources and services through the online platform, creating an online network of businesses and resource flows. Personal assistance in the form of website support will be available to users should it be required.

Revenue streams will come from subscription and usage fees to the platform, and brokerage fees as a percentage of sales and services. A fixed, transparent system of pricing will remain available to all users of the platform. An administrative office and IT support centre are required in terms of physical resources, intellectual resources include branding, the design of the web platform and the database, and mapping information collected and stored on the platform. Financial resources include the set up costs for the online platform and funds for capacity building and maintenance of the database. The key activities of the mapping database business are providing a platform for the online sourcing of textiles for reuse, recycling and reprocessing purposes to suppliers and buyers, and creating data reports of resource reallocation to support the development of a circular economy. Key partnerships for the platform include clients such as textile collectors, sorters and graders, charities and NGOs plus local councils, governments and waste management companies, fashion and textile design, production, retail and sales, educational institutions, recycling and reprocessing industries. Collaborative partnerships with business networks and trade associations, plus media and press will establish a wide scope of operations and awareness of the service. The cost structure includes fixed costs such as a central office and headquarters, salaries and IT support and variable costs such as web design and branding, online set up and maintenance plus advertising and promotion costs.

Textile resource mapping platforms currently in development include the ‘Trash to Trend’ waste mapping platform originally developed by Reet Aus during the designer’s PhD research (Aus, 2011). The platform was originally designed to map and catalogue textile throughout Estonia, and make this information available to designers wishing to use these textiles in upcycled fashion designs. Now a not-for-profit organisation renamed ‘Wastemapping’ but

utilising the same website address ‘reuse.ee’, the platform maps waste resources in Estonia, Latvia and Finland with the aim of bringing materials back into circulation for environmental and economic benefits (Wastemapping, 2017). Winners of H&M’s Global Change Award, Reverse Resources are developing software to re-circulate leftover materials from fashion production through a live online feed. A warehouse inventory system is being developed to track leftovers in parallel to production and link this information directly to an online marketplace. Through the Reverse Resources software, it may be possible to consolidate quantities of similar materials from different sources to create required amounts for producers and create viable circular economy solutions on an industrial scale. (Reverse Resources, 2017). Reverse Resources aim to connect with 150 companies in three years, backed by 150,000 Euros of seed funding through the H&M award. By developing the software in consultation with the brands, designers and producers it will serve, Reverse Resources will be able to create a platform with a global scope, usability and consideration for the information requirements of both suppliers and buyers of textile waste resources. For the Wastemapping platform, online mapping software has the advantage of showing the location of waste geographically; however as a not-for-profit organisation relying on donations from users, the challenge will lie in sourcing the required financial backing to keep the platform running. For these two Estonian based companies, the greatest success in re-circulating textile materials globally may lie in collaboration. As stated by Nicholas Morley, former Associate Director of Oakdene Hollins, "*If brands and retailers are serious about greater closed loop recycling, then they need to collaborate more, as concerted action will change the system much faster.*" (Mathews, 2015)

2.4 The Fashion Industry

Although clothing manufacturing in the UK has declined, fashion still represents a vibrant multi-billion dollar global industry with international job opportunities at multiple levels. The industry faces significant challenges relating to environmental protection, workforce ethics and new technology, bringing a changing perspective to employment and current practices. (Jeffrey and Evans, 2011). It is stated that 'The fashion industry with its complex supply chains has, in several well publicised cases, been shown to be wanting in its treatment of workers, and much work is needed to rectify endemic practices' (Black and Anderson, 2010). Fashion consumers exhibit little concern for responsible consumption choices, as unlike food, unethical garment choices are not perceived to have detrimental health effects (Chan and Wong, 2012).

2.4.1 Fashion Supply Chain

Nordas (2004) acknowledges that the clothing and textiles supply chain can be seen as a number of discrete activities, but highlights that it is increasingly organised as an integrated production network, from the sourcing of raw materials via design and production to distribution and marketing. From an examination of supply chain management theories by Hines (2005), we can conclude that a supply chain can be viewed as an interconnected network of organisations and business functions, including retail buyers and suppliers. Each part works to integrate the flow of materials and information towards providing the products and services demanded by consumers. Jeffrey and Evans (2011) describe how the global supply chain is in a constant state of flux, and encompasses existing key players, along with emerging markets. Farrer (2011) also illustrates the complexity of existing fashion supply chains, 'commencing with fibre processing, through textile manufacture, garment assembly, distribution, sales and eventual disposal'. The challenge is to alter this model to include sustainable practice but also maintain profitability. Processes in the flow could in fact be more localised, but are usually global, and the use phase and disposal are seen as end points, rather than stages in a cycle.

2.4.2 Fashion Design and Production

A comparative evaluation of six design and production process models was carried out in order to synthesise these paths into one summarised model. The different methods investigated were highly iterative and at times non-linear, however certain points of similarity exist between each process outlined. In each of the design models examined from literature, the process is often initiated with a brief, which outlines the design task or problem. This is then followed by research of the market and of the creative aspects of the range to be produced. The design process or synthesis phase is where the problems are solved and

possible solutions ideated. This is followed by the making of sample products, which form the basis for promotion and marketing, before the products are manufactured and distributed to retailers, ready for consumers. Based on processes outlined by McKelvey and Munslow (2003); Jenkyn Jones (2005); Burke (2008); Matharu (2010); Armstrong and LeHew (2011); and Sinha (2002) cited in Gwilt (2011) a summarised design and production process model has been created by Han (2012), shown in Figure 10.

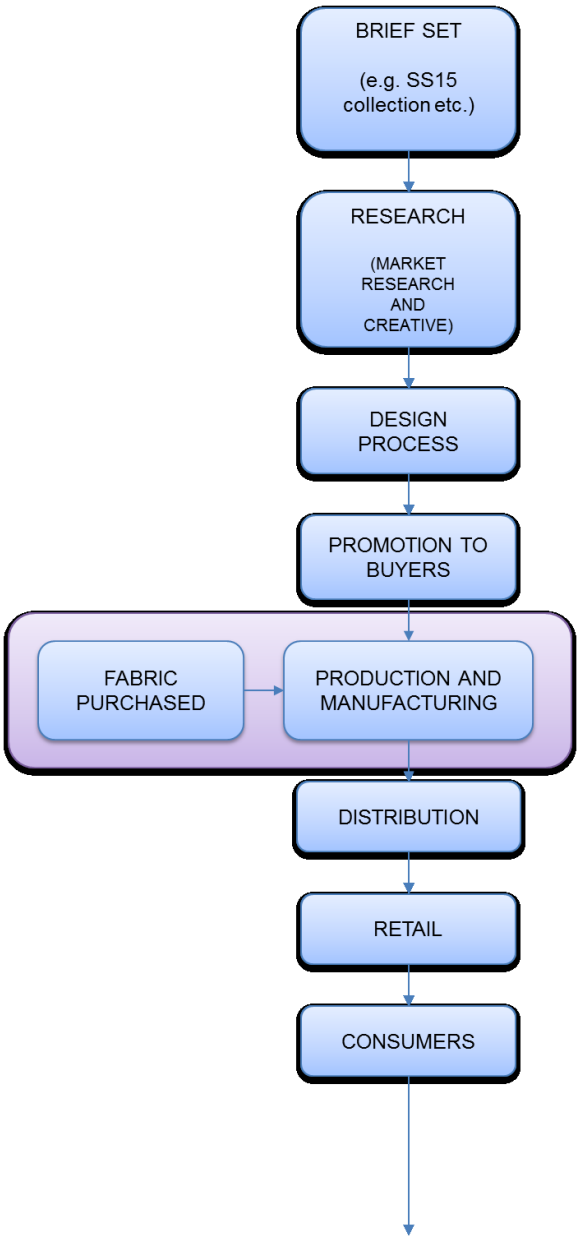


Figure 10. The Fashion Design and Production Process Model

2.4.3 Fashion Communication and Marketing

Solomon and Rabolt (2004) describe how much fashion communication is often visual or non-verbal, and can include impersonal sources such as the media (magazines and websites) and personal sources such as friends and family, or people encountered on the street. The communication model is thought of as containing the following elements:

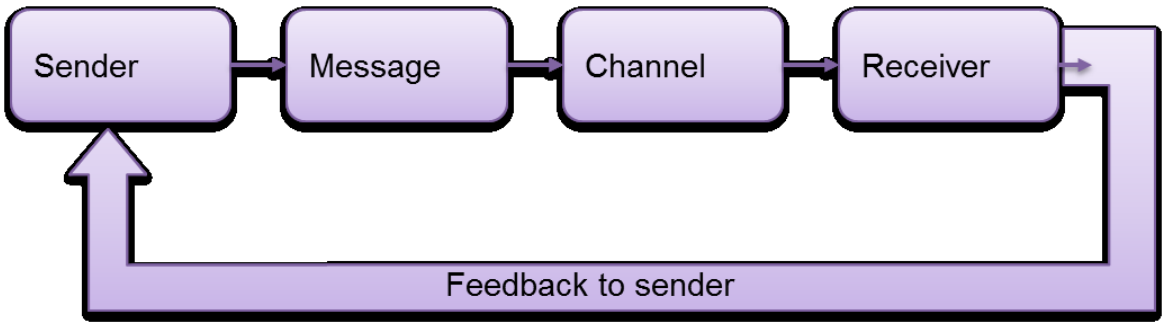


Figure 11. The Fashion Communication Model

In terms of fashion communication this can take the form of more formalised marketing messages, which must consider; who the message is for, how the message should be constructed, what it is about, where the message will be transmitted, why it is relevant to the targeted consumers and when should it be delivered (Solomon and Rabolt, 2004; Moore, 2012). Lea-Greenwood's (2013) promotion strategy mix outlines the different options which can be used in combination to deliver these messages:

- **Advertising**, such as paid for communications from companies to consumers and businesses.
- **Sales Promotion**, such as in store activities.
- **Personal Selling**, such as sales personnel communicating with customers.
- **Public Relations**, such as product placement in editorial features.
- **Direct Marketing**, such as email newsletters and text messages.

Moore (2012) also recommends considering the 'Five Ws' for the content of these elements:

- **Who** is it about / for? **What** is it? **Where**? **When**? **Why** is it relevant?

Lea-Greenwood (2013) recommends that these elements should be integrated with the rest of the marketing mix, alongside considerations for products, price and distribution and questions on how to achieve the business goals from the current starting point. However Schneider (2014) highlights that communicating sustainability to mainstream consumers who

care more about product design and personal benefits must take a different approach than strategies to communicate with those habitually choosing to purchase ethical fashion. Mainstream consumers are reported to be 'driven by fun, simplicity, achievability, visibility, success, social status and esteem, as well as rewards and recognition'. They follow 'fashion and trends, embrace consumption and always seek the best solution to improve their lives'.

To appeal to these customers, sustainable fashion brands must be aware of these influences and how they can incorporated into a successful communication strategy. Schneider (2014) outlines fifteen communication strategies to integrate sustainable fashion into mainstream fashion communication:

Research	Normalise	Engage
Define	Disclose	'Humourise'
Prove	Personalise	'Celebritse'
Simplify	Narrate	Diversify
Educate	Surprise	Measure

Taking these considerations from Schneider (2014) into account alongside Lea-Greenwood's (2013) promotion mix and Moore's (2012) 'Five Ws', fashion communication strategy can become an integral part of the circular economy fashion business model framework. The ulterior motive of sustainability communication is to alter the course of current consumption patterns, moving away from the insatiable consumer fashion appetite (Sharma and Hall, 2010), which puts unreasonable pressure on manufacturers to cut corners and overlook worker safety. Conscientious consumption operates within a sustainable fashion system, and is defined by attitudes and behaviours driven by reducing triple bottom line impacts from buying, use, maintenance and disposal of products. Key practices include seeking sustainable alternatives, low impact care options and responsible divestment of unwanted items (Eder-Hansen et al., 2012).

2.4.4 Sustainable Fashion Communication

Goworek et al. (2012) suggest that there is a 'values-action' gap between consumers stating that they want to purchase green alternatives and actually translating their intentions into purchasing behaviour. In order for consumers to be able to make an informed decision, especially when purchasing sustainable fashion, information needs to be broadcasted to the

audience in a clear and coherent manner. Past studies have pointed out that the information provided predominately focuses on only the environmental aspects of sustainability (e.g. (Sheth et al., 2010); Ha-Brookshire and Norum 2011). Potential conflicting messages portrayed across different media lead to confusion and consumer scepticism (e.g. Gam and Banning 2011), and negative consequences overall. This indicates the need for further investigation into the clarity of message and how it is understood. Consumer perceptions within the context of sustainable fashion have been widely researched, yet current research lacks an understanding of how organisations that are producing sustainable fashion not only communicate their message to their audience, but also analyse how their consumers perceive their messages. This research addresses this gap by investigating how sustainable fashion brands firstly identify who their consumers are, and then understand their perceptions of sustainable fashion. Rettie et al. (2012) suggest that identifying 'green consumers' can be problematic as individuals may participate in environmentally focused behaviours in some areas, but not others. Profiling green consumers demographically may work to target relevant segments of the population for social marketing campaigns, however identifying which 'green' behaviours consumers perceive as normal and not normal may offer the most effective strategy for connecting with the desired sector (Rettie et al., 2012).

In their examination of consumer acceptance of sustainable fashion in Germany, Eifler and Diekamp (2013) indicated that 'only 9.5% of the respondents considered 'eco-clothing' an area of innovation', and that 'sustainable clothing plays a more marginal role than other ecological products in aspects of everyday life'. This demonstrates how sustainable fashion is yet to be considered the norm, and barriers such as a lack of confidence in retailers and certification schemes, and high prices are limiting factors in the wider acceptance of sustainable fashion. In an examination of consumer perceptions of eco-labelling in clothing in Norway, Laitala and Klepp (2013) demonstrated how for many respondents, checking eco labels in clothing and following the recommended practices was also, not the norm. Many respondents simply based their knowledge on earlier experiences. These studies indicate that an understanding of how different consumer segments receive and perceive information is crucial to integrating sustainable fashion messages alongside mainstream fashion media, in order for sustainable behaviours to be considered the norm. Sustainable fashion communication (SFC) utilises the same methods as mainstream fashion communication, such as online and print media, however additional strategies have also been employed which aim to engage and inform consumers, should they seek out and participate in the sharing of practices, causes, campaigns, research and corporate social responsibility commitments.

Online SFC takes many forms, however most distinct is coverage in specialist ethical fashion websites such as Ecouterre, Love Your Clothes and Ethical Fashion Forum (Love Your

Clothes, 2015; www.ecouterre.com, 2017; www.ethicalfashionforum.com, 2017); news websites such as The Guardian and Huffington Post (www.huffingtonpost.co.uk, 2017; www.theguardian.com, 2017); mainstream fashion media websites such as Refinery 29, Vogue and Marie Claire; blogs like Style Bubble; and social media accounts from retailers, brands, charities, bloggers, media organisations and designers (Bowe, 2011; Wong, 2016; Lau, 2017; www.marieclaire.co.uk, 2017; www.refinery29.uk, 2017; www.vogue.co.uk, 2017). Ecouterre presents stories on sustainable fashion design, with an appealing and accessible product and brand focus that is not dissimilar to that of traditional fashion editorial; but with greater clarity on the sustainable, social and ethical credentials of the products featured. However, a focus on product and design offerings is often at the cost of proposing more strategies to buy less and make clothes last longer (Scaturro, 2008). WRAP's Love Your Clothes websites provides and alternative to this product focus, by offering strategies and guides to reduce the use phase and end-of-life impacts of clothing. Ethical Fashion Forum (EFF) provides an industry resource for brands, designers, businesses and educators. Using their own research as well as drawing together additional relevant sources, EFF is able to offer market insights into who the sustainable fashion consumer is and what drives them (Ethical Fashion Forum, 2011).

Online coverage from mainstream fashion media focuses on the desirable and compelling aesthetics of sustainable fashion, presenting it in an accessible and visually engaging format which emphasises style and design, as well as ethical credentials and positive impact. Both specialist and mainstream online platforms, however, presents sustainable or ethical fashion as a distinct and separate phenomenon to mainstream fashion, in the format of standalone websites or articles. It is rarely ever integrated alongside regular fashion editorial pieces, resulting in the perception of ethical fashion as a novelty at best, and as undesirable and inaccessible at worst (Blanco-Velo et al., 2010; Han, 2012). As stated by Kibbe (2013), 'Fashion and sustainable fashion must meet and mingle. They can no longer be two separate categories and movements.' In this way, we can start to normalise sustainable fashion offerings and 'green' consumer behaviour (Rettie et al., 2012). Social media platforms provide multiple channels of two way communication, helping to normalise behaviours through peer comparison and opinion sharing. Feedback loops of fast information, from brands to consumers, consumers to other consumers, and consumers to brands disrupt traditional models of top down communication, and allow individuals to share their knowledge and understanding (Cervellon and Wernerfelt, 2012), influencing each other, and the industry as a whole, and finding empowerment to explore market place resistance and new ideas (Bly et al., 2015). In these new channels of communication, individuals are demonstrating their preference for peer-to-peer information sharing in social networks. This is a development

which organisations must take heed of when targeting the desired audience they have identified.

Online SFC also occurs through brand and retailers websites, through which organisations communicate their product offerings and CSR commitments. For smaller, niche ethical fashion brands, online communication offers the most cost effective method of reaching the widest audience with their retail offerings (Beard, 2008; Sinha et al., 2016). For dedicated sustainable fashion brands such as Rapanui or People Tree, it is often immediately clear from their online retail sites that what they are offering is environmentally friendly clothing. Within a few clicks on product pages, information on the supply chain and production of the garments in also made clear, and this can be followed through in more detail by following through the links that are presented in the product information (People Tree, 2017; Rapanui, 2017). For these brands, ethics and sustainability are apparent as the core ethos on their websites. For more mainstream fashion brands, such as Marks and Spencer and H&M, sustainable offerings are not immediately apparent at all from their e-commerce sites. H&M lists its 'Conscious Collection' as just one of its ten style 'concepts' for women, and it is only possible to find Marks and Spencer's sustainable cotton section by first searching through their 'Plan A' CSR pages (H&M, 2017; Marks and Spencer, 2017). The message about the CSR commitment and values from H&M and Marks and Spencer is not clear or easy to locate for shoppers. A strategy to include a CSR link, but not explicitly, displays reticence on the part of these brands to engage and educate consumers who would not otherwise seek this information (Holm, 2013).

Sustainable fashion communication (SFC) is also carried out through print media, in newspapers and magazines. In an article for Ethical Fashion Forum which provides a summary of mainstream media publications to have featured ethical fashion, only The Guardian, Grazia and The Independent are highlighted as print media publications which cover the topic (Bowe, 2011). Prior to this, research by Blanco-Velo et al. (2010) found ethical fashion to have been covered, although not always positively, in each of the top four UK daily newspapers (The Sun, Daily Mail, Daily Record and Daily Mirror) and their related Sunday editions, the top UK free newspaper (The Metro) and top four UK fashion magazines (Cosmopolitan, Glamour, Vogue and Marie-Claire). While print media provides a vital source of knowledge and information that can empower consumers, there is still limited progress in behaviour change. The gap between translating this knowledge into practice is in part caused by the multitude of contradictory and changing messages perpetuated by the media. This lack of clarity is a significant barrier to the wider impact of ethical and sustainable fashion communication. (Blanco-Velo et al., 2010; Markkula and Moisander, 2011). Consumers may in fact derive more information and understanding from food labelling and supermarket shopping as regards the ethical message, as found by Blanco-Velo et al. (2010), suggesting

that the tactics of in-store and on-product communication maybe be more effective that print media in reaching consumers.

Sustainable and ethical fashion awareness organisations and charities such as Fashion Revolution, Labour Behind the Label, Clean Clothes Campaign have made great strides in broadening the scope of the sustainable fashion message. With campaigns across social media to raise consumer awareness of production and supply chain issues, such as the hashtags #whomademyclothes and #lovedclotheslast (fashionrevolution.org, 2015). Fashion Revolution have worked to create a message which connects with a younger audience, focused on shopping and social media, who also receive much of their information from education. Their 'Haulternative' guide targeted a generation inspired by the sharing of fashion shopping 'hauls' across social media channels such as YouTube. The guide provided alternative strategies for engaging with fashion, such as buying second hand, mending, swapping, customising and renting, and encouraged the sharing of these practices in videos posted on social media (Fashion Revolution, 2017). Campaigns to directly connect with politicians and policy makers have also taken place. In an address to the House of Lords in 2011, Baroness Young of Hornsey raised questions of what plans the government had to support and promote the ethical and sustainable fashion and clothing industry (hansard.parliament.uk, 2011). This was also followed some years later by an address to the Houses of Parliament by the Fashion Revolution organisation to address similar issues (Somers, 2015). What these strategies demonstrate is a clarity of message and coherency of values at the heart of the sustainable fashion debate. By targeting policy makers this approach aims to influence decision making with an industry and country wide impact, however the effectiveness is yet to be shown in downstream business practice.

2.4.5 Corporate Social Responsibility

Baumann-Pauly et al. (2013) understand CSR as 'an umbrella term for the debate about the relationship and interactions between business and society and any concept concerning how managers should handle public policy, social and environmental issues'. Graafland and Mazereeuw-Van der Duijn Schouten (2012) describe how European policy makers understand CSR as 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interactions with their stakeholders on a voluntary basis, beyond compliance to mandatory, legal requirements'. The concept reflects the idea that organisational behaviour is a potential key to the promotion of societal goals, including the achievement of governmental strategies on sustainable development. The UK government defines CSR as 'the voluntary actions that business can take, over and above compliance with

minimum legal requirements, to address both its own competitive interests and the interests of wider society' (Caldwell, 2012).

What is clear from these definitions is that CSR outlines a course of action that a business takes to act in a socially, environmentally and economically ethical way, ensuring that profit making activities do not have negative impacts on the welfare of society. Voluntary actions taken outside of profit making are to have a positive impact on all stakeholders, such as consumers, workers, the local community, the environment and wildlife, as well as the shareholders of the business. CSR offers opportunities in the fashion industry to mitigate some of the negative economic, social and environmental impacts outlined at the beginning of this chapter. In terms of environmental actions, waste minimisation techniques, recycling and end of life product considerations plus green energy and ecological material usage all offer scope for impact minimisation. From a societal perspective, addressing workers' rights in terms of fair wages, allowing collective bargaining and trade unions, and offering opportunities for worker development and education represent responsible business practice. Sourcing materials and workforce locally, and supporting local communities through education and opportunities are also positive actions. CSR also offers opportunities for lowering costs through resource efficiency, and increased consumer confidence based on distinct ethical brand values (Caldwell, 2012). In the current age of information, consumers are increasingly aware of brand ethics, and emerging groups of consumers now 'actively create and communicate strategies for sustainable fashion behaviour that can overcome the nebulous and somewhat paradoxical reality that sustainable development in the fashion industry presents' (Bly et al., 2015).

2.4.6 Transparency and Traceability

Traceability in the supply chain refers to the ability to identify and trace the origin, distribution, movement and application of products and materials. This serves to ensure sustainability and ethics in areas such as human rights, environmental impacts and anti-corruption, as well as optimising performance, quality and safety (Potter, 2008; Norton, 2014). Transparency refers to actions taken by a company to build the trust of consumers, by publishing all their supply chain traceability information (Niinimäki, 2013). Traceability requires a system to record and follow the trail accurately, and complex supply chain require the participation of multiple stakeholders to trace commodities collaboratively (Norton, 2014). For sustainable fashion, the system of eco-labelling has been utilised to help consumers identify the traceability of their products, however consumers can become confused about what the labels imply, which prevents effective communication of transparency and traceability symbolised by the marks (Henninger, 2015).

2.4.7 Economic Impacts of Fashion and Textiles

The fashion industry 'generates billions of dollars from the initial process of raw materials production to the last stage of selling the product's (Shen et al., 2014a), and represents a significant portion of the world economy (Dadigamuwage, 2012). Keller et al., (2014) estimated the global apparel and footwear market to be worth approximately £1,100 billion (€1,575 billion), Kirchain and Olivetti (2013) estimated the global textiles and apparel market to be worth £1.15 trillion (US$1.8 trillion) and DEFRA (2010) estimated the global worth of the clothing industry alone to be worth over £500 billion; indicating that the overall worth of the global apparel and textile market to be between £0.5 to 1 trillion. Exports of clothing and textiles alone represent 5.1% of total world merchandise trade (McNamara, 2008). Allwood et al., (2006) reported that in 2000 consumers spent £644 billion globally (US$1 trillion) on clothes, with a third of these sales in Western Europe, one third in North America and one quarter in Asia. This is confirmed by Gereffi and Frederick (2010) who also report this activity to be concentrated in three main areas: The United States, The European Union and Japan. With over 60% of production concentrated in East Asia, this has led to an uneven distribution of production and consumption globally (Kirchain and Olivetti, 2013).

The EU Clothing and textiles sector produces a turnover of £116 billion (€166 billion). In 2013, the sector comprised of 185,000 companies which employed 1.7 million workers. This accounted for 6% of the total employment in manufacturing in Europe. 'The sector in the EU is based around small businesses. Companies with less than 50 employees account for more than 90% of the workforce and produce almost 60% of the value added'. (European Commission, 2015c). According to Gereffi and Frederick (2010), using figures from the World Trade Organisation (WTO), in 2008 the European Union accounted for nearly half (47.3%) of total world apparel imports of £240 billion (US$ 376 billion). The European Commission (2013) report exports of £24.9 billion (€35.7 billion) in 2008, which seems at odds with the WTO figure for imports, although it is not clear exactly what is included in each figure.

Although historically the UK was the home for clothing and textile production, globalisation and labour intensive production has seen manufacturing grow in Asia in the last 50 years (Dadigamuwage, 2012). Due to this, the EU industry has seen radical changes in which some companies have maintained and strengthened competitiveness by reducing mass production and concentrating on a wider variety of higher value added products, through quality, design and technological innovation. Indeed the high-end sector grew faster than the rest of the European economy during the recent economic crisis, employing over 1 million people, exporting over 60% of production outside Europe, and accounting for 10% of all EU exports. (European Commission, 2015c).

Threats to this economic advantage include 'the increased prevalence of counterfeit goods, increasing shortages of skilled workers, and difficulties for small and medium-sized fashion enterprises to access finance' (European Commission, 2015a). Pellizari et al. (2011) characterise some of the main difficulties the European textiles and clothing sector as being globalisation and internet based technologies in a market dominated by low prices, cheap imports and international sub-contracting. Value chains in specialised areas of manufacturing or industrial clusters have been disrupted by these international trade relations, affecting support services and industrial development. The overall image of the sector as a low-profit, low innovation industry with low wages and questionable working conditions has vastly reduced its attractiveness to young workers and professionals, making the recruitment of a skilled workforce problematic. Added to this are difficulties finding credit, regions where entrepreneurship is underdeveloped and a lack of easily identifiable best practice enterprise examples. (Pellizari et al., 2011). To continue to mitigate further threats from 'trade liberalisation, increasing external competition, consumer developments, technological advances, changes in production costs and environmental issues, the sector must continuously reinvent business models' (European Commission, 2015a).

The British Fashion Council estimated the UK fashion industry to be worth £26 billion a year (The British Fashion Council, 2015), however the UK fashion and textiles sector has experienced a marked decline since production moved off-shore to the Far East in the 1970s. Apparel manufacturing declined by 69% between 1995 and 2012, and total turnover also fell by 64% to the £26 billion in 2012 (Hammer et al., 2015). The combined UK fashion and textiles sector collectively represents around 2,500 businesses, employing over 100,000 people. The total contribution from these combined sectors is in the region of around £37 billion, with wholesale exports at around £6.5 billion and retail sales of £50 billion (The UK Fashion and Textile Association, 2013). 'Broken down by specific fashion and textiles goods and services, data shows that since 2008, consumer spending on items such as footwear (£6,432m in 2009) and household textiles (£5,830m) saw a slight decrease. However, sales of clothing materials (£622m), clothing and clothing accessories (£2,182m), clothing (£37,278m), footwear repair and hire (£82m) and dry cleaning and clothing hire (£1,004m) all saw an increase in expenditure' (Sector Skills, 2011). The total production value of UK textiles is worth just under £9 billion, and key clusters of production are located in Greater Manchester, Lancashire, West Yorkshire, the East Midlands and Scotland (The Alliance Project Team, 2015a).

The UK fashion industry benefits from strengths such as creativity, innovation and specialised manufacturing to lead the way as an internationally renowned centre for design; however a lack of employment opportunities and lack of entrepreneurial skills in new designers put the industry at a definite disadvantage (British Fashion Council, 2010). Areas noted for

improvement are links between hard science and fashion, in more technical aspects of design, skill gaps in the labour market leading to the failure of many new design businesses, and barriers to entry for emerging talent, such as a lack of entrepreneurial skills and training, and difficulty in securing funds (British Fashion Council, 2010).

While opportunities also exist in emerging markets abroad and the rising importance of online sales, threats to the industry are also present in the economic stagnation, public funding pressures, such as those in education and issues in foreign markets, such as more attractive employment options to UK designers, rival fashion weeks and inflationary pressures in the supply chain (British Fashion Council, 2010). Livesey and Thompson, (2013) also cite an uncertain economic outlook creating instability, access to and retention of a skilled workforce, access to capital and managing tensions between local and global markets as key issues the UK's mid-sized manufacturers.

2.4.8 Social Impacts of Fashion and Textiles

Socially, clothing affects and influences the lives of almost all people, as it is used to cover the body and provide warmth and protection, also often serving as means of communicating identity and social status. Societal effects are also those upon the workers who produce the textiles and garments around the world. As clothes get cheaper, trends move faster and consumption levels rise, reports of poor working conditions, environmental degradation and high levels of waste follow the fashion industry's culture of constant newness (Allwood et al., 2006; Kim and Hong, 2011). Globally, there are more than 40 million workers in the textile and garment manufacturing industry. Around 19 million of these workers are in China alone (McNamara, 2008). Low-cost apparel producers in the developing world have recently increased their export shares in global markets, which may reflect a substitution effect of the economic recession, in which the lowest cost suppliers gain market share ahead of more expensive rivals (Gereffi and Frederick, 2010), often at the expense of worker's rights and lives.

The 'ten countries with the largest estimated numbers of people in modern slavery are: India, China, Pakistan, Uzbekistan, Russia, Nigeria, the Democratic Republic of the Congo, Indonesia, Bangladesh and Thailand. Taken together, these ten countries account for 71 percent of the total estimate of 35.8 million people living in modern slavery' (Global Slavery Index, 2014). Products known to be produced using modern slavery include cottonseed, garments and tailoring, and embellished and embroidered textiles, such as those created through artisan activity (Global Slavery Index, 2014), many of which comprise a significant share of the national industries of the ten countries cited.

Employment in the artisan sector represents the second largest group of workers in the developing world after agriculture. Sales of artisan produced goods increased by over 50% from 2002 to 2012 to over £22 billion (€29 billion / $32 billion) annually. Over 65% of artisan activity takes place in developing economies. The majority of artisans served are women and small producers working informally. Many artisans lack access to broader markets and face supply chain and market information asymmetries. Artisans work in isolated environments, without business skills, market access, and the financial tools needed to boost production and sales. (Alliance for Artisan Enterprise, 2015).

The most valuable activities in the supply chain take place within the lead firms, with manufacturing outsourced to low wage, developing countries, leading to an unbalanced portioning of supply chain value (Gereffi and Frederick, 2010). In countries where production is located, auditing failures and commercial practices such as the demand for low prices, short deadlines and unstable relationships with suppliers have led to ongoing violations of workers' rights. These rights include freedom of association, such as joining a trade union in order to get other workers' rights respected, as well as the right to a living wage, standards of health and safety, reasonable working hours and safeguards against forced labour, child labour, discrimination, abuse or harassment (Parker, 2013).

Muller and Maher (2012) also note that the 'main problems for garment workers include low wages poor social and economic standards, and an overall lack of freedom of association and collective bargaining'. Using Bangladesh as an example, Muller and Maher (2012) report that the average monthly wage for a garment factory worker in Bangladesh is around £27.50 (€32 / US$43). This is still below the official minimum wage of £35 (€50 / US$54) per month, and far below the calculated living wage of £181 (€260 / US$284) per month (Clean Clothes Campaign, 2013), representing just 15% of this monthly living wage. Demonstrations in 2006 and 2010 have successfully campaigned for the minimum wage to be raised, however not all factories adhere to these standards. Less than 1% of workers in Bangladesh's ready-made garments sector are part of a trade union. Workers are reluctant to form unions as they feel their livelihoods are threatened and representatives can be exposed to physical abuse or harassment. Workers also often complete 11 hour days for six to seven days per week (Muller and Maher, 2012).

Strategies to mitigate these violations include government inspections, corporate accountability and auditing, as well as reviewing commercial practices, building capacity, empowering workers and creating joint liability agreements (Parker, 2013). As yet, none of these schemes has been entirely successful in meeting minimum standards across the supply chain, as initiatives are often under resourced, unenforced, and run in fear of driving away

sources of investment. Corruption is also a major problem, as are fundamental faults within current business models and pricing structures. However, promising signs are emerging for joint liability agreements, where brands are held jointly responsible for workers' rights, alongside suppliers (Parker, 2013). After the tragedy of the Rana Plaza building collapse in April 2013, killing over 1200 people, the legally binding Accord on Fire and Building Safety in Bangladesh has been signed by over 150 brands, international trade unions for garment workers and retail workers and Bangladeshi trade unions, and witnessed by NGOs.

As with the global scenario, the societal effects of the clothing and textile industry in Europe relate directly to workers. The European textiles sector is dominated by female workers (59%) and older workers, with young employees making up just 5% of the workforce (European Trade Union Confederation, 2012). Employment in the textiles and clothing sector in Europe has fallen from over 2 million in the period from 2003 to 2009, to 1.7 million in 2013 (European Commission, 2003; Reichel et al., 2014). This is linked to globalisation and the shift of manufacturing to low-cost countries, as well as technological innovations shifting demand away from low skilled jobs and reducing numbers of more highly educated workers (European Trade Union Confederation, 2012).

In Pellizari et al's (2011) assessment of difficulties faced by the textile and clothing sector in five cluster regions of the EU (Tuscany, Northern Greece / South Bulgaria, Eastern Slovakia, Nord Pas de Calais / Flanders and Northern Portugal / Galicia), societal pressures highlighted included a lack of clear labelling, indicating the origins of products to consumers, unregistered workers, a lack of health and safety procedures, a lack of human resources and skills training, a lack of entrepreneurship, accessible credit and cohesive industry representation plus the dominance of the INDITEX group. Euratex (2014) also recognise that sector skills are concentrated in an ageing workforce, close to retirement and that there is an urgent need to recruit and train a new generation of workers. To this end, steps are currently being taken by EU joint projects to 'increase the attractiveness of the sector to new generations of skilled workers; foster the creation and implementation of joint programmes for education and training based on emerging needs; enhance responsiveness to the rapid change in the sectors, in terms of training and skills development and develop a quality training certification scheme to be adopted in Europe'. (Euratex, 2014). More serious social issues also exist within the European textiles and clothing sector, as highlighted by the Clean Clothes Campaign. Problems with low wages are compounded by excessive overtime hours; up to 400 extra hours a year in some countries, a lack of formal employment contracts; leading to underpayment, employer tax evasion, lack of job security and non-payment of social security contributions for workers. A prevalence of informal and home-based workers has also led to sweatshop

conditions and a complete lack of minimum legal entitlements and labour rights. (Luginbühl and Musiolek, 2014).

Working conditions in the European sector are considered safe, with a lower than average incidence of non-fatal accidents at work (European Trade Union Confederation, 2012), however a recent report for the Clean Clothes Campaign found garment workers living off extremely low wages in Eastern Europe and Turkey. For example, in Bulgaria, the average monthly wage for a garment worker is around £109 (€141 / US$169), very slightly above the legal minimum wage of £107 (€139 / US$156) and only 14% of the monthly living wage of £788 (€1,022/ US$1,147) (Luginbühl and Musiolek, 2014). The average wage for a garment worker in Bulgaria covers only 70% of food expenses, before other expenses such as rent, utilities, health care, transport and supporting dependents needing clothing and education.

Strategies recommended to mitigate this discrepancy are for governments of host states of garment production to raise the legal minimum wage to at least 60% of the national average wage, and progressively increase wages towards the estimated living wage. In Bulgaria, this would see monthly wages initially rising to around £189 (€245 / US$275) and steadily climbing towards £788 (€1,022/ US$1,147). It is also recommended that governments of host states of garment production should hold multinational companies accountable for their actions along the supply chain regarding labour and human rights in a move towards transparency. (Luginbühl and Musiolek, 2014).

According to The British Fashion Council, UK fashion is dominated by younger, female employees in retail, indicating the need for a more diverse offering of employment, but the UK clothing sector benefits from equal opportunities in terms of gender, age and ethnicity (British Fashion Council, 2010) however, The Alliance Project highlights that an aging workforce, endemic skill shortages and a lack of investment are critical threats to the UK garment and textile industry. A recent report by Hammer et al., (2015) also highlights some serious issues affecting vulnerable migrant workers in the UK's East Midlands garment production hub. Numbers of workers in the UK garment industry are directly connected to the off-shoring of production to Asia (Hammer et al., 2015). 'Between 1995 and 2000, employment declined from 216,000 to 127,000, a decline of 58.8 per cent' (Lane and Probert, 2004). By 2012, employment had decreased by 84% from 1995 to 27,250 employees. Female employment was worst hit, 'declining by 89% compared to 61% for male employment. Correspondingly, the share of female employment in apparel manufacturing has fallen from 87% to 63%'. Numbers of firms have fallen, as have their sizes, declining by 61% to a total of 3,384 firms, employing on average 8.6 workers, down from 22.2 in 1995.

Since 2007 a limited reversal of these trends has taken place, in which lead firms in hubs such as the East Midlands, Manchester, and London have found a competitive advantage in the fast turnaround and quality they can obtain from UK suppliers, who are often utilising a supply of vulnerable labour. The Alliance Project estimate the current number of textile workers in the UK to be between 90,000 and 100,000 (The Alliance Project Team, 2015b). Sourcing strategies based on very small margins, numerous orders, and fast turnaround times, combined with poor regulatory provision has led to unauthorised subcontracting, making use of an under-regulated labour market. Endemic problems in the industry include under or non-payment of wages, 'the absence of employment contracts, late payment of wages, the official declaration of a portion of wages only and welfare benefits considered a 'wage component'. Reports consistently put the average wage at £3 per hour and state that this applies to 75-90% of jobs in the sector'. These 'work practices that result in health problems, inadequate health and safety standards, verbal abuse, bullying, threats and humiliation, and the lack of toilet breaks, among others'. Most vulnerable are 'migrants on student or visitor visas as well as undocumented migrants who no longer have the legal right to work and remain in the UK. These groups often work for even lower or no wages, work night shifts, and are dismissed at will, amongst other potential issues. Unauthorised subcontracting plays an important role in the avoidance of ethical industry standards as well as corporate, national and social insurance tax obligations'. (Hammer et al., 2015).

The underpayment of wages, contributes to in-work poverty, debt, child poverty, and the exploitation of vulnerable migrants (Hammer et al., 2015). The Leicester study by Hammer et al., (2015) found that these vulnerable workers worked an average of 28.3 hours per week, earning around £584 per month; however reports in the study of workers regularly earning just £3 per hour would mean a monthly take home pay of just £340. The official UK minimum wage is £7.20 per hour (HM Government, 2016), however The Living Wage Foundation have calculated that the UK living wage should be £8.25 per hour (Living Wage Foundation, 2015). Using these figures and the average hours worked per month, it can be seen that the minimum wage payment should be £815 and the living wage payment £934. This indicates that a large proportion of UK garment workers are being underpaid by as much as 64%. Recommendations to mitigate these violations include greater accountability from the UK government, lead firms, and manufacturers in terms of auditing, verifiable payment of wages, transparency of supply chains plus dedicated ethical trade managers and buyers.

2.4.9 Environmental Impacts of Fashion and Textiles

Environmental impacts of the fashion and textiles industry are connected with production, use and maintenance and eventual disposal (Chen and Burns, 2006). Intensive chemical impacts

result from production processes such as dyeing and finishing. Agricultural fibre production such as wool and cotton requires large quantities of water and utilises harmful pesticides. Finite resources of petrochemicals are used for synthetic fibre production and requires energy intensive processes; all resulting in significant negative impacts (Caniato et al., 2012). Between 1997 and 2001, worldwide consumption of cotton products required 256 Gm^3 of water per year (Chapagain et al., 2006). Global cotton production was reported to have accounted for nearly one quarter of pesticide use in 1994, despite using just over 2% of cropland globally. The Swedish Chemicals Agency identified more than 1,900 chemicals used in garment production. 165 of these chemicals are classified as hazardous to health or the environment in the EU (Reichel et al., 2014). Toxic chemicals and oils removed during wet processing end up in wastewater, which producer countries often have very little infrastructure to process effectively (McGill, 2009).

The purchase and use of clothing leads to the release of over 850 tonnes of CO_2 per year worldwide (around 3% of global production CO_2 emissions), including both embodied emissions in the clothing, and emissions arising from clothing use (washing, drying, ironing) (Carbon Trust, 2011). The fashion industry has been based on the notion of continual consumption of the 'new' and discard of the 'old', leading to premature product replacement through perceived obsolescence, and the emergence of the 'fast fashion' business model (Kozlowski et al., 2012). In 2010, worldwide consumption of apparel fibres reached approximately 63 million tonnes, comprising of 60% synthetic fibres, 33% cotton, 4% cellulosic fibres, 2% wool and 1% flax (Food and Agriculture Organization of the United Nations and International Cotton Advisory Committee, 2013), however in a presentation at the Textile Exchange conference in 2014, SOEX claimed that only 20% of textiles are recycled each year around the world (Ditty, 2015). Between 4 to 9 tonnes of CO_2 equivalent emissions can be saved for each tonne of clothes and textile reused, compared to disposal in landfill or newly made production (Michaud et al., 2010).

The environmental effects of the garment industry in Europe are directly connected to consumption patterns. Growing consumption of cheap clothing has exacerbated negative lifecycle pressures such as energy use and emissions from waste. 87% of clothing consumed (by value) in Europe in 2012 was imported, up from 33 % in 2004. 'Consumption of clothing and footwear accounted for 3% to 6% of environmental pressures resulting from EU household consumption in 2008'. Europeans consume more clothing today than 20 years ago, causing greater global environmental impacts. (Reichel et al., 2014).

Each year the UK clothing and textile industry is responsible for between 31 - 38 million tonnes of CO_{2e}, as well as 70 million tonnes of waste water and 1.5 million tonnes of solid waste

(Allwood et al., 2006; WRAP, 2012c). 989,000 tonnes of oil equivalent fossil fuel and 90 million tonnes of water were also used (Allwood et al., 2006). Bartlett et al., (2013) estimated that 'between 2.5 and 2.7 million tonnes of textiles are consumed annually in the UK. Of this, between 1.1 and 1.4 million tonnes are clothing'. Including commercial waste, over half of all textiles disposed of are sent to landfill (1,386,000 tonnes), and a further 350,000 tonnes are used to produce energy from waste (EfW). These volumes combined equate to 64% of consumption (1,736,000 tonnes).

Steps to reverse these negative effects are complex and must take into account the interconnectedness of supply chains and global production networks. Actions taken to mitigate harm in one part of the fashion system may have negative effects elsewhere in the supply chain. Opportunities exist to effect positive changes through adjustments in consumption, production, use-phase and end of life practices. Limiting consumption and seeking out better quality items produced with minimal environmental impact, fair labour conditions, and using and maintaining clothes for longer through conscientious care methods, repair, reuse and recycling could work to reduce environmental and social impacts. (Reichel et al., 2014).

For businesses, sustainability considerations must be made beyond design and production phases, throughout the supply chain and in all management decisions (Caniato et al., 2012). Environmental thinking must be integrated along the whole supply chain, in areas of product design, material sourcing, manufacturing, distribution and end of life management, merging supply chain demands with sustainability considerations into 'Green Supply Chain Management' (Caniato et al., 2012). Educating designers about the downstream and lifecycle effects of their decisions should connect the design process to an awareness of raw material impacts (Reichel et al., 2014). Connecting with citizens about use-phase opportunities such as donating, reselling, leasing and lending systems and repair services could work to extend the use phase and reduce demand for new products. End of life opportunities such as extended producer responsibility could work to ensure recycling and reuse in the post-consumer phase, and EU recycling targets may provide a positive indication for the development of new textile recycling technologies which would work to turn fibres back into products or feed stocks. (Reichel et al., 2014).

2.5 Consumer Perspectives

Solomon (2013) describes consumer behaviour as 'the study of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas or experiences to satisfy needs and desires'. According to Kim and Hong (2011) 'personal factors determine a consumer's shopping motivations across various products classes including

clothing. Personal variables, such as age or gender, and personality can influence a person's shopping motives and style. Although demographic characteristics are useful for describing market segments, studies on consumers' personal and social motivations and psychographic characteristics are more useful for understanding fashion consumers.

2.5.1 Demographics

Demographics are the descriptive characteristics of a population (Solomon, 2013) and function as a useful indicator of market segmentation, retailer loyalty and potential new consumers for established and emerging markets (Summers et al., 1992). Demographic variables can include age / generational cohort, ethnicity, education, gender, residential location, income, employment status, occupation, marital status and social grade. In a report for Mintel Sender (2011b) also categorises consumers using the National Readership Survey's social grades (www.nrs.co.uk, 2014) as an indicator of target markets for retailers. This data may also be collected alongside information such as expenditure, time spent shopping and shopping orientations in order to understand how demographic factors affect consumer behaviour (Summers et al., 1992; Workman and Cho, 2012).

2.5.2 Gender

Female consumers are recognised as the primary purchasers of apparel, with higher levels of fashion leadership and higher recreational and fashion-conscious shopping orientations. Many females also enjoy shopping even without making a purchase, indicating that to these consumers, the shopping environment also holds social rewards and experiential pleasures (Pentecost and Andrews, 2010; Kim and Hong, 2011; Workman and Cho, 2012). Both male and female consumers were concerned with the quality and price of clothing, were motivated by the brand names of fashion products, and had a tendency to buy impulsively. Male consumers purchased less often, however were more likely to spend a greater amount when they did (Pentecost and Andrews, 2010; Workman and Cho, 2012).

2.5.3 Age and Generational Cohort

The age of consumers can be used to assign a generational cohort category. These are as follows:

Generation Y (born 1976–1994)

Generation X (born 1965–1975)

Baby Boomers (born 1946–1964)

Swing (born 1930–1945)

(Pentecost and Andrews, 2010)

Generation X and Generation Y are both more impulsive in their fashion purchases than other generations, but Generation Y, the youngest cohort of consumers, are particularly of interest as research shows that they have a more positive attitude towards fashion. This cohort is higher on purchase frequency, fashion fanship and impulse buying than other generations. As well as having significant spending power, this generation is highly attuned and receptive to fashion and the shopping environment, spending more time in retail malls, making them more likely to be responsive to marketing and merchandising efforts.

There is also a greater association with fashion leadership amongst younger consumers (Kim and Hong, 2011). Sender (2011b) also linked age to a genuine enjoyment of shopping as a leisure activity, stating that younger women love buying clothes. Statistics show that nearly eight in ten (77%) 16-24-year-old women and more than six in ten (64%) 25-34s enjoy shopping for clothes. As well as this large group Sender (2011b) identified a rise in women who are willing to invest in fewer, but better-quality items, particularly under-35 upper middle class and middle class women. Young women aged under 35 and women with children aged 5-9 like to compare prices online before buying in-store. Fewer women are buying for replacement, but nearly half of over-55s still mainly buy new clothes to replace worn-out items (Sender, 2011b).

Sender's (2011b) four age related groups are:

The Fashion Conscious	(18%) are biased towards 25-34s.
The Price Aware	(35%) are females aged 45.
The Store Loyal	(30%) are young, single women aged 16-24.
The Size Conscious	(17%) are mothers aged 25-44.

In investigating consumer motivations for garment disposal behaviours Bianchi and Birtwistle (2012) noted that greater environmental awareness and consumer age are both positively linked to recycling behaviour, with older participants in Australia more likely to donate to charity and older participants in both Australia and Chile more likely to recycle generally. It is posited that young consumers of ‘fast fashion’ may become discarders rather than recyclers, indicating the growth of a ‘throw-away’ fashion attitude (Birtwistle and Moore, 2007).

2.5.4 Education, Income and Social Grade.

Cervellon (2012) linked higher levels of education and income as drivers to the purchase intention of vintage clothing. Joung and Park-Poaps (2013) found that family norms experienced while growing up were most influential in relation to garment donation and reuse behaviour. Sender (2011b) also highlighted a rise in under 35 AB grade women making choices to invest in fewer, but better-quality items. It may also be useful to gather data on consumers' marital status, employment status, occupation, ethnicity and residential location in order to gain a clear understanding of the market segmentation and to ensure a sample population which is representative of the wider consumer population as a whole.

2.5.5 Consumer Categories

Literature examining consumer motivations provides systems of categorising consumers in relation to their likelihood of adopting new products and trends. Kim and Hong (2011) refer to previous literature in which fashion consumers are categorised as leaders, followers and laggards. Morgan and Birtwistle (2009) refer to Rogers (1983) in which consumers are divided into five distinct categories: 'innovators, early adopters, early majority, late majority and laggards'. Workman and Cho (2012) refer to fashion change agents and Pentecost and Andrews (2010) also refer to fashion leaders or fashion innovators. Each of these systems of categorisation indicates that there will be vanguard fashion leaders, who adopt new ideas quickly, fashion followers, who adopt new fashions after they see that others have and the laggards who are wary of adopting new trends (Kang and Park-Poaps, 2011; Kinder, 2014). Specific psychographic characteristics and behavioural motivations are associated with each of the categories described. Sender's (2011b) categories of consumers as fashion conscious, price aware, store loyal and size conscious are perhaps more descriptive of the specific psychographic characteristics within each of the previous systems of categorisation.

2.5.6 Psychographic Characteristics

Psychographics refers to the 'aspects of a person's lifestyle and personality' (Solomon, 2013). In relation to fashion shopping, this includes the emotions, reasoning, history, psychology and thought processes behind decisions to purchase certain products (Morgan and Levy, 2002). For fashion consumers this can include attitudes, the level of confidence in expressing opinions, fashion fanaticism, and purchase history relating to expenditure, impulsivity and store patronage (Pentecost and Andrews, 2010; Kang and Park-Poaps, 2011; Kim and Hong, 2011; Workman and Cho, 2012). Attitudes towards spending on clothes may be either positive or negative. Pentecost and Andrews (2010) cite the findings of Weekes (2004) that the majority of the younger generation in the UK would not reduce their expenditure on items of

clothing, even if they had to reduce their overall spending, perhaps due to debt, indicating a positive, if misguided attitude towards expenditure.

Kang and Park-Poaps (2011) found that consumers with a high level of confidence in expressing their opinions had greater satisfaction in their purchases through this ample knowledge. Furthermore, the satisfaction felt was not only with the products purchased but a hedonic and positive satisfaction with the shopping experience. Fashion consumers can be characterised by the level of involvement, devotion and passion they consciously express towards the consumption of current fashion, sometimes called fashion fanship (Pentecost and Andrews, 2010). This level of fanship or fanaticism was found to be a driver of expenditure. Expenditure and store patronage were also found to be affected by gender, age, and consumer likelihood of adopting new trends and impulsiveness when purchasing (Pentecost and Andrews, 2010; Kim and Hong, 2011; Workman and Cho, 2012). This indicates that certain categories of consumers will receive more input from and in turn be more responsive to short term marketing campaigns in retail outlets (Pentecost and Andrews, 2010; Kim and Hong, 2011).

2.5.7 Leaders and Followers

Often at the very centre of social networks, opinion leaders in a system are those who are able to frequently influence the behaviour and attitudes of others. An individual is viewed as an opinion leader by others due to their 'technical competence, social accessibility, and conformity to system norms', be those norms directed or opposed towards change in each particular system (Rogers, 2003). Rogers (2003) characterised opinion leaders as those who are more exposed to all forms of external communication, have a higher socio-economic status and are often more innovative. An opinion leader's innovative behaviour is then imitated by other members of the system, through interpersonal and social networks. This makes them important influencers in the integration of more sustainable consumption behaviours throughout society.

Proportional Split

Rogers (2003) divided consumers in to five categories based on their level of innovativeness:

- 'Innovators (2.5%) – the first takers of new technology or innovation, people who bear high risks, enjoy highest social status among other categories, and always updated with new technology and products in the market and financially sound.'

- ‘Early Adopters (13.5%) – they adopt the technology at the second fastest rate after the innovators, well educated, sociable and younger in age, enjoys highest opinion leadership for other categories.’

- ‘Early Majority (34%) – Slower than the first two categories in adopting the innovation, influenced by the early adopters and forms the majority of all of the categories.’

- ‘Late Majority (34%) – adopt the tried and tested technology, very less financially sound and enjoys least opinion leadership.’

- ‘Laggards (16%) – Last to adopt the innovation, they wait for the price to go down so that they can buy, least financially sound, almost no opinion leadership and with least sociable among other categories.’

Rogers (2003) first two categories of innovators and early adopters align with the characteristics exhibited by fashion opinion leaders, of being ‘highly fashion conscious and aware of new trends’, exhibiting technical competence and leading conformity to social norms. 16% of the population falls into this leadership category. Kim and Hong (2011) characterise fashion leaders as individuals who obtain ‘emotional and experiential satisfaction in shopping’. These individuals receive and value the excitement and enjoyment from using shopping to find bargains, ‘make themselves feel better’, socialise with others and keep up with new trends, products and ideas, much more so than non-leaders, exhibiting social accessibility for fashion followers. Kim and Hong (2011) state that ‘price consciousness and emotional satisfaction from searching for ‘‘good buys’’ is more important for consumers with fashion leadership tendencies.’ Fashion leaders are important to retailers as not only do they have ‘a greater interest in fashion’ than other consumers, increasing their likelihood to patronise shops and spend more, but they have an influence over other consumers behaviour through their own personal consumption (Kim and Hong, 2011). Indeed Morgan and Birtwistle (2009) cite the work of Goldsmith et al. (1999), which highlighted that ‘the success of a new fashion product is related to its acceptance by fashion innovators in the early stages of the product life cycle.’

The early and late majority categories make up the fashion followers, who are ‘interested in new trends but less inclined to adopt them very quickly.’ This group represents 68% of the population, with the final 16% made up of the fashion laggards, who care much less about fashion trends (Morgan and Birtwistle, 2009). As the vast majority of consumers in the market are fashion followers, who will adopt a new fashion after they see that others have done so before them, the importance of leaders in influencing opinion and followers as ‘critical players in generating sales and profits’ are both key consumer aspects (Kang and Park-Poaps, 2011).

Fashion innovators can be characterised by preferences for fashion related publications and media and their above average interest and spending on new fashion (Phau and Lo, 2004). Innovators are likely to be found shopping in boutiques featuring as-yet-unknown designers, while the early adopters avoid risk by shopping for fashions already 'field tested' by the innovators in fashion-forward designer stores.

Sender (2011b) categorised consumers into four age related groups:

- The Fashion Conscious (18%) are biased towards 25-34s. They like to dress in a fashionable way, enjoy shopping and buy clothes frequently.
- The Price Aware (35%) are females aged 45 and over who have cut back on their clothes shopping in the last 12 months and have traded down to value retailers and supermarkets and buy less on impulse.
- The Store Loyal (30%) are young, single women aged 16-24. They shop at mid-market women's fashion stores and are loyal to these retailers, although they do not enjoy shopping for clothes and dislike trying on garments in the shop.
- The Size Conscious (17%) are mothers aged 25-44 with children under-five who struggle to find retailers that sell fashionable clothes for their size, as well as garments that flatter and are trendy.

Although these groups do not completely align with the categories described by Rogers (2003) or with the groups of leaders, followers and laggards, these categories are still useful in that they are descriptive of differing psychographic characteristics and behavioural motivations of consumers.

2.5.8 Behaviour Motivators

Kim and Hong (2011) describe 'human motivation as the reason for a person's specific behaviour', 'resulting from a person's internal need states and external stimuli.' Westbrook and Black (1985) are cited in stating that 'the level of satisfaction achieved from the motivated behaviour is related to the strength of the relationship between the need state and behaviour.' These motivations can include emotional gratification, value seeking, social interaction, idea seeking and adventure seeking.

2.5.9 Emotional Satisfaction

Fashion leaders place particular importance on the emotional satisfaction and enjoyment they receive from shopping. 'Interactions between consumers and sales personnel in a retail

setting are also a significant determinant of consumer satisfaction with the products purchased' and the shopping experience (Kang and Park-Poaps, 2011; Kim and Hong, 2011).

2.5.10 Social Comparison and Opinion Showing

While engaging in the social behaviours of observing others, sharing expertise and opinions plus attention or status seeking during the shopping experience, consumers take part in ability comparison, which is an individual's personal judgement of themselves in comparison to others. This leads consumers to 'pay attention to what others wear and what is popular before purchasing products. Social browsing also reflects the tendency of consumers to follow fashion trends through the observation of others and to adopt the fashions they see worn' (Kang and Park-Poaps, 2011; Kim and Hong, 2011).

The social comparisons which result from these behaviours 'are significant drivers of social shopping in fashion', which in turn contributes to consumers overall product satisfaction and experience satisfaction. Fashion leaders in particular are positively related to social shopping motivations. The sharing of opinions can also result in 'cognitive satisfaction with the products purchased and hedonic and positive-affective responses such as fulfilment, excitement, and pleasure in association with the shopping experience' (Kang and Park-Poaps, 2011; Kim and Hong, 2011).

2.5.11 Experiential Motivations

Consumers are also attracted to appropriate retail settings, in which they enjoy spending time with friends and family, and where they can find new ideas, trends and values through verbal and nonverbal cues and can share their opinions and interact with others. However, a situation with too many new people around, such as in an over-crowded shopping centre can prevent consumers from completing any of these activities and negatively affect their experience. The quality of the interactions between consumers and sales personnel in a retail setting are also a significant determinant of consumer satisfaction. When sales personnel are effective in enhancing consumer satisfaction with appropriate knowledge and experience with respect to their retail store's product choices the consumer experience is enhanced. Retailers could formulate strategies for training sales personnel and creating shopping venues that please their target customers in an effective way. Sales associates' in-depth product knowledge and hands-on experiences with products will be essential in this process. Consumers also participate in adventure shopping, which refers to shopping for the purpose of experiencing excitement, adventure, stimulation self-expression through leisure. Adventure in shopping is not necessarily a direct goal for consumers but an emotional state that is achieved from hedonic motivations related to shopping (Kang and Park-Poaps, 2011; Kim and Hong, 2011).

2.5.12 Bargain Hunting

Kim and Hong's (2011) findings indicate that fashion leaders are more interested in finding bargains than other consumers and that fashion leadership is positively related to value shopping, however Rogers (2003) describes the laggards as those who often have limited resources and a precarious economic position, indicating they too may be searching for price savings. Quality, price and brand names motivate both male and female consumers in purchasing, but fashion change-agents or fashion leaders are more brand-conscious than others (Workman and Cho, 2012). It may be that bargain hunting is expressed in different ways for fashion leaders and laggards, with fashion leaders searching for good deals on designer brands and laggards merely searching for the lowest priced clothing options overall.

2.5.13 Need for Uniqueness, Personal Style and Appearance

Reiley and DeLong (2011) examined consumer desire for a unique appearance in relation to sources of new and vintage clothing acquisition, with a view to ascertaining how this might apply to a sustainable model of consumer practice. In Guiot and Roux's (2010) study, the need for a unique personal appearance was found to relate positively to overall motivations towards second-hand shopping. In demanding a unique appearance, young fashion consumers patronise a variety of sources, including vintage stores, second-hand clothes shops, boutiques, department stores, high street shops and e-commerce sites. Some consumers practice upcycling on a personal level, customising second-hand clothes and shoes, thereby personalising these items and increasing their value to the owner. Customising and altering clothing is one way for consumers to assert their individuality (Reiley and DeLong, 2011).

Further opportunities for a unique personal appearance are offered by what Reiley and DeLong (2011) describe as the ‘DIY’ movement, in which articles of clothing are embellished or repurposed by designers. Vintage items are adapted and second hand clothes are used as source materials, from which new clothes are made; both forms of fashion upcycling. African-French designer Lamine Kouyate is cited as using this latter technique of deconstruction and upcycling in his Xuly Bet collection. Consumers are also involved in creating upcycled fashion on a personal level, buying used or vintage garments to repurpose into new styles, having abandoned the stigma attached to wearing another’s used clothing, and instead rejoicing in the history of the garments. Reiley and DeLong (2011) recognise that to meet the challenge of sustainability, fashion practice cannot continue in the way it has thus far. The ideas of clothing as purely functional and fashion as a statement of individuality have to be combined using design to create a transformative culture which produces conscientious, sustainable and beautiful garments.

2.5.14 Finances

According to Sender (2011a) clothing remains a high priority for most women. Six in ten women place a high level of importance on looking well dressed and almost one quarter spending their extra money on buying new clothes or jewellery once their bills are paid, compared with less than one in ten men. The consumer climate remains tough, with falling discretionary spend, rising inflation and pay packets falling in real terms. Women are increasingly looking for promotions and cutting back. As shoppers are reining in their spending, and shopping around more, value for money has become even more important (Sender, 2011a). Rising female unemployment rates, together with a fall in personal disposable income, may also result in women reining in their spending on clothes (Sender, 2011a). Growing numbers of women have cut back, with almost a quarter shopping in less expensive stores and one in five shopping in the same stores but buying less expensive items (Sender, 2011a). Sender (2011a) also includes graphical data in a report for Mintel showing that women mainly buy clothes on special offer and also for replacement, with impulse purchases and price comparison also top concerns.

2.5.15 Sustainable Fashion Consumption

The Nordic Initiative defined sustainable fashion consumption as ‘the use of clothing for purposes beyond utilitarian needs, including ‘identity making’; achieved without jeopardising the ability of future generations to meet their needs. Sustainable fashion consumption is outlined as a sub-set of the sustainable fashion system, and includes consumer attitudes and behaviours that lead to reductions in the triple-bottom line impacts of buying, wearing, caring for, repairing and recycling fashion goods. Demanding sustainable alternatives, caring for garments in less impact intensive ways and responsible disposal or recycling of obsolete goods are also key practices.’ (Eder-Hansen et al., 2012). For Fletcher, (2008), sustainable fashion was about strong and nurturing relationships between consumers and producers, in which garments encourage versatility, inventiveness, personalisation and individual participation. Eifler and Diekamp, (2013) also echoed this sentiment, characterising sustainable fashion by slow trends with long-lasting value and compelling design.

Reiley and DeLong, (2011) made it clear that ‘we need to understand the difference between clothing as material production and fashion as symbolic production, as clothing is concerned with physical or functional needs of sheltering, shielding, and protecting, while fashion links us to time and space and deals with our emotional needs, as individuals and social beings’. In Bly et al.'s, (2015) ‘study of sustainable fashion consumption pioneers’, participants defined ‘their own notions of sustainable fashion’ through ‘motivational and contextual factors, rather than distinct industry concepts’. As well as reducing social and environmental impacts,

participants defined broader concepts through which to achieve deeper goals, such as freedom, uniqueness, resistance, authenticity, trust and well-being; using personal style as a strategy to engage with sustainable consumption.

2.5.16 Sustainable Fashion Consumer Attitudes

Research by Gam et al. (2010) indicated that consumers are 'more likely to buy products made by companies with an environmentally friendly business strategy', and that those 'who were environmentally conscious would purchase environmentally friendly products, and were even willing to pay more for them'. However, 'environmentally friendly products were successful only if customers perceived the regular product attributes as superior to competitors' conventional offerings.'

Focus group data collected by Han (2012) signified that the current consumer perception of sustainable fashion is one of basic, unremarkable styles or of out-dated, 'hippie' fashions, yet consumers indicated that they were inclined to purchase upcycled garments if the styles were relevant to them. Indeed aesthetic sensibilities are recognised as being vitally important to sustainability by (Reiley and DeLong, 2011), as making the sustainable alternative more attractive and desirable to others will encourage them to become more willing to adopt it. Design should be of key importance in the creation of new sustainable fashion products.

More than half of UK adults claim to have made a purchasing decision based on ethical reasons in 2009, compared to one in four in 1999; however style and price are still noted as being more significant to consumers than ethics (Goworek et al., 2012), consistent with findings from MSc research into fashion upcycling (Han, 2012). Respondents in Goworek et al.'s (2012) study also felt sustainable clothing was too expensive, and many were not aware of its availability. It was felt that increased information for consumers would instigate behaviour change. The results of a study by Gam et al. (2010) confirm findings from Han (2012) that show that price is 'one of the most decisive factors in determining when consumers actually purchase apparel products, and for an eco-friendly product to be successful in the market, its environmental superiority must not be the core value added.'

A polarisation in behaviour is occurring amongst consumers, who on the one hand express increasing concern regarding the ethical impact of their purchases, yet have become increasingly comfortable with the availability of low cost trend led fashion (Beard, 2008). There is now a growing awareness by consumers of the exploitation within the fashion industry of both people and environment. High profile campaigns, such as those of the 1980's anti-fur groups succeeded in making morally questionable practices within the fashion industry seem socially unacceptable, giving rise to the idea of ethics being 'fashionable' (Beard, 2008).

Consumer desire to be viewed as responsible in their fashion purchases may also be a reaction against ostentatiousness, in times of economic and moral uncertainty. Consumers are increasingly questioning their overall impact on society at large (Beard, 2008).

In this questioning of current societal values, consumers may also develop a nostalgia for times gone past, seeking out vintage and retro products to characterise themselves as separate and distinct from the recent past. This may indicate a reaction of underlying suspicion to recent social, cultural and political developments. In purchasing and wearing vintage clothing, consumers not only participate in 'recycling' an old piece of clothing, but demonstrate a knowledge as fashion 'connoisseurs' (Beard, 2008). In examining the determinants of vintage fashion purchasing Cervellon's (2012) study found that 'neither the purchase of vintage clothes nor that of second-hand clothes is driven by ecological consciousness directly. Eco-consciousness was related to the intention to purchase second hand pieces through the mediating effect of bargain hunting. The principal driver to the purchase of vintage fashion shopping was nostalgia'. Nostalgia influenced consumers' intention to purchase vintage pieces both directly and indirectly through treasure hunting. 'For the large majority of participants in this study, economic motives were the main drivers of second hand clothing consumption' (Cervellon, 2012).

A study by Guiot and Roux (2010) looked at the motivations of second-hand shoppers, through qualitative and quantitative studies. Four domains of motivations were suggested, which were then split further into fourteen dimensions. The main four groups included critical concerns, experiential expectations from objects, experiential expectations linked to places and economic motivations. Critical concerns and motivations included ethical and ecological concerns, as well as avoiding ostentation and convention. Experiential expectations from the objects found on offer, such as nostalgia, uniqueness and originality of the objects were linked to self-expression and a satisfaction from transforming or repairing the object, and for it to have more significance to the purchaser through these experiential elements. Experiential expectations linked to the places where second hand shopping takes place included the expectation of social interaction and a stimulating environment, in which an element of treasure hunting and story-telling related to the objects on offer may enhance the experience. Economic motivations, included wishing to pay less, searching for a fair price, bargain hunting and gratification derived from price savings (Guiot and Roux, 2010).

In their study, Guiot and Roux (2010) also uncover an underlying factor of 'distancing and avoidance behaviours towards the classic market system, as well ethical and ecological concerns expressed by consumers, relating to recycling and waste prevention'. The presence of this view was initially recognised in prior literature, and confirmed by the results of Guiot

and Roux (2010). *'The respondents attempt to distance themselves from incitements to consume or buy new possessions, which they perceive as a waste of resources that characterises consumer society. They praise the originality, stimulation, and social contact provided by alternative channels.'*(Guiot and Roux, 2010)

2.5.17 Design and Style in Sustainable Fashion

It was recognised that increasing numbers of new ethical clothing brands and designers are creating more stylish and varied clothing, which is becoming more widely available (Mintel, 2009b), however consumers still expressed concerns about out-dated styles and confusion in labelling terms, as well as price in results and findings from Han (2012). This is confirmed by Gam et al. (2010) who summarised 'consumers' main barriers to purchasing environmentally friendly products, including apparel. These were higher product cost, little choice, aesthetic disadvantages, complexity of information and uncertainty about actual environmental benefits.'

Supplying consumer demands as a sustainable fashion brand is reliant on creating styles which are as relevant and stylish to consumers as the best of the high street, if not better; and able to compete on price (Han, 2012). Beard (2008) advises that to fully appeal to consumers on every level it is also necessary for ethical fashion brands to develop clothes beyond the typically casual styles on offer. People Tree's use of fashion forward designers such as Peter Jensen, Thakoon, Bora Asku and Richard Nicoll set them apart from other brands in leading the way forward through design. Brands need to combine a clear message of authenticity and transparency with good design and a greater stylishness, with engaging marketing and branding - devoid of confusing jargon, in order to fully appeal to consumers.

In a study by Young et al. (2004) exploring upcycled design using post-consumer textiles to create a range of functional, urban inspired clothing; multi-functional designs were based upon criteria arrived at from a focus group of young commuters. Reactions to the garments indicated that good design was a crucial first step for the environmental principles behind the collection to be understood and accepted. Ultimately, the power of the environmental concepts was that they could strengthen the value of the accepted design.

2.5.18 Garment Maintenance

Goworek et al. (2012) found that consumers were unlikely to repair garments due to a lack of time and skills, and the low cost of replacement. A low proportion of Goworek et al.'s (2012) study participants had sewing skills. 'Findings show that this can contribute towards the frequent disposal of clothes which could have been repaired relatively easily'; however, 'repair

is rarely a cost effective option'. One strategy to deal with this problem may be to offer short courses in repair and maintenance, with promotion sponsored by larger retailers.

Offering repair and sewing skills may be an effective way to slow consumption in the mass market, while still retaining customer loyalty through the purchase of services rather than products (Payne, 2011). Gam et al. (2010) also showed that participants in a study who had a higher involvement in clothing conservation also practiced environmental purchasing behaviour. The study by Goworek et al. (2012) also 'indicated that consumers could be persuaded to change their behaviour in relation to sustainability by being encouraged and enabled to reflect more on their behaviour, as the participants did during the home tasks and subsequent workshops.'

Effectively promoting a brand through its sustainability ethos can be done by actively engaging consumers with local community projects. The advantage of this lies in raising the profile of the brand and making eco-fashion accessible to all interested parties. Clothes swaps and craft and sewing skills workshops mean that the sustainable fashion ethos can be accessed by those who do not have the budget to afford upcycled or eco-fashion pieces, but who still take an interest in the idea of reducing consumption and reusing waste. Offering consumers the option of attending clothes swap events provides a 'design for end-of-life strategy' of the responsible disposal of garments (Han, 2012).

3. Methodology

3.1 Introduction

This chapter provides an overview of the research philosophy, methodological strategies and approaches to data collection and analysis used in this study, from a critical realist perspective. The purpose of the study was to analyse current practices in circular economy fashion and textiles systems, in order to propose a guiding framework and communication strategy to integrate circular economy practices into mainstream fashion. Identification of the pre-existing value streams for discarded textiles, current practices to reuse and revalue these textiles and current consumer attitudes and behaviours in relation to the design, promotion and retail of sustainably produced fashion allowed the study to expose and understand the underlying mechanisms at work behind these structures.

The research design for collecting and analysing the data from literature, case studies, and the consumer survey, and an outline of the ontological and epistemological perspectives underpinning the research are presented. The mixed methods design which combined qualitative and quantitative approaches and techniques is outlined, followed by the methodology, sampling procedures, data collection and analysis methods for each phase of the research. Literature reviewed indicates that a major barrier to the wide spread uptake of circular economy strategies is the 'values-action gap', which exists when consumers express ethically motivated intentions, but fail to follow this up with behaviour reflective of their concerns.

'The 'attitude–behaviour gap' or 'values–action gap' is where 30% of consumers report that they are very concerned about environmental issues but they are struggling to translate this into purchases.' (Young et al., 2010)

In order to study the intricacies presented in understanding the forces influencing these behaviours, it is necessary to consider the multiple stages and key stakeholders within circular economy fashion, from textile collectors, sorters and graders, to brands, retailers, experts and consumers and the role each plays the system.

3.2 Research Philosophy

Research philosophy outlines what the researcher understands to constitute 'acceptable knowledge and the process by which this is developed' (Saunders and Tosey, 2013). This viewpoint guides decisions made on the design and strategical methods employed in answering the research questions put forth. Incorporated within the research philosophy are

the ontological and epistemological position of the researcher. Ontology is concerned with the nature of social reality, how this operates and is constructed, and influences the world around us (Bryman, 2012; derby.ac.uk, 2016). Epistemological concerns include the researcher's stance on how the social world should be studied, what should pass as acceptable knowledge, and how the research should be conducted. (Bryman, 2012). As part of the overall research philosophy, the ontological and epistemological perspectives give rise to the methodological and strategic decisions of gathering and interpreting data.

The purpose of this study was to identify and analyse the current practices in circular economy fashion and textiles systems in order to expose and understand the underlying mechanisms at work behind these structures; thereby enabling the integration of these strategies into the mainstream. For this reason, the study adopted a critical realist philosophical stance which emphasises an awareness of the fact that social and cultural structures exist independently of the ways they can be discursively constructed (Reed, 2001; Wikgren, 2005). The independent social and cultural structures central to this research were the textile collection and sustainable fashion industries within the circular economy, which exist as realities independent of various interpretations by academics, industry professionals or consumers. The identification of the causal and generative mechanisms within these realities give context to the observable outcomes and allow the explanation, but not prediction of the complexities between the real, actual and empirical realities of Bhaskar's critical realist ontology (Bhaskar, 1978; Bryman, 2012; Sayer, 2012).

Directly applied to this study are the three stratified domains of social reality within a critical realist ontology, which are the 'empirical', the 'actual' and the 'real' (Bhaskar, 1978) as shown in Figure 12. In this study, the 'empirical' domain is where the processes, practices and experiences of the textile collectors, fashion designers, sustainability experts and consumers are experienced and can be observed and recorded by the researcher. It is recognised that these events occurred in the 'actual' domain, such as textile sorting plants, design businesses, retail locations and homes and lives of consumers, and may not have been observed at all or have been understood differently by each individual. This indicates that there is an intervening interpretation between the two domains. Mechanisms operating in the 'real' domain of circular economy fashion and textile systems result in the events occurring in the 'actual' domain. Events occurring in both the 'actual' and 'real' domains may not always be observable; however this does not mean that these aspects of reality are not there or are unconnected to what is observed and experienced in the 'empirical' domain (Easton, 2010). Recognising through this ontology that knowledge is derived by understanding these multiple domains of reality and the generative mechanisms intervening between them, a critical realist epistemology focuses on the causal effects and complex social structures which produce

empirical knowledge. The aims of this research set out to understand the causal mechanisms behind the practices, processes and experiences within circular economy fashion and textiles, and where the barriers to and opportunities for mainstream industry acceptance exist.

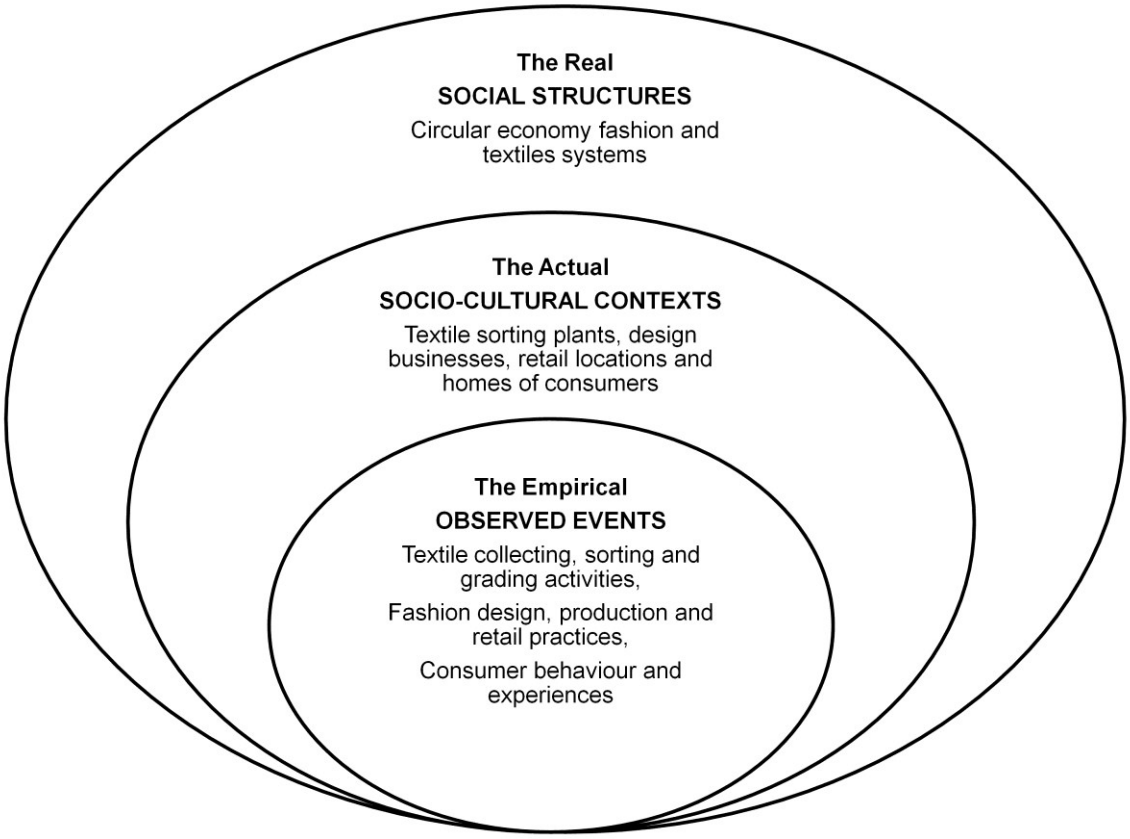


Figure 12. Bhaskar's three domains of reality in the Critical Realist ontology (1978)

3.3 Mixed Methods Research Strategy

A mixed methods research strategy was utilised for this study, which could be said to take the best of both qualitative and quantitative research within a single project, combining multiple sources of data to gain new insights and identify information that may have otherwise been overlooked (Axinn and Pearce, 2006; Denscombe, 2010b). In quantitative research social reality is viewed as an external, objective phenomenon. Data collected are objective as they 'exist independently of the researcher and are not the result of undue influence on the part of the researcher'. Causal relationships between variables, not processes, are examined, often with a 'deductive approach to the relationship between theory and research, in which emphasis is placed on the testing of theories' (Denscombe, 2010b; Bryman, 2012; Denzin and Lincoln, 2013). Qualitative research emphasises a preference for the way individuals interpret

the social world. A fluctuating social reality emerges as the property of each individual's construction. Emphasis is placed on the role of the researcher in constructing the data. Qualitative researchers stress the socially constructed nature of reality with emphasis on the value laden nature of enquiry, seeking to answer questions about how social experience is created and given meaning. An emphasis is placed on the qualities of entities and on processes and meanings that are not experimentally examined or measured. An inductive approach is taken to the relationship between theory and research, in which the emphasis is placed on the generation of theories (Denscombe, 2010b; Bryman, 2012; Denzin and Lincoln, 2013).

Complex research questions require comprehensive empirical documentation for which a combination of approaches is often necessary. Mixed methods research combines elements of qualitative and quantitative research approaches to give greater breadth and depth of understanding and corroboration to these questions (Axinn and Pearce, 2006; Johnson et al., 2007). By combining multiple methods it is possible to elicit important new insights into the causes and consequences of beliefs and behaviour (Axinn and Pearce, 2006). A more complete picture can be given, using complementary data from alternative perspectives to give an all-embracing vision on the subject (Denscombe, 2010b). In using the mixed methods approach, a pragmatic stance of employing the most effective and useful combination of methods for answering the research questions focuses on practical outcomes, despite differing philosophical traditions for the methods employed (Denscombe, 2010b). Differing methods can also be used to develop research instruments and aid sampling in an opposing method. For example, in this study qualitative data from case studies and interviews was used to develop relevant questions for a survey, or information from one method can be used as the basis for selecting a sample of population to participate in the research through a different and contrasting method (Denscombe, 2010b; Bryman, 2012).

Varying the data collection approach can provide information from one approach that was not identified in an alternative approach (Axinn and Pearce, 2006). Highly structured methods of data collection can be balanced with less structured methods, and less structured methods can be used to document causal mechanisms responsible for producing the causal relationships documented through highly structured methods (Denscombe, 2010b). Bryman (2012) describes how vignettes from qualitative findings may illustrate some quantitative findings; rich interview data can be employed to put some flesh on the bare bones of statistical data. In this way, mixed methods may provide a better understanding of a phenomenon than if just one method had been used and qualitative study may provide the context for understanding broad-brush quantitative findings (Bryman, 2012). Similarly, although a static

snapshot in time; an understanding of trends in quantitative data may indicate where processual investigation may need to occur in qualitative research.

3.4 Mixed Methods Sampling

In this study a combination of two non-probability sampling techniques, purposive and snowball sampling, were used to select the most appropriate samples for each stage of the research based on their relevance to the topic of the investigation. (Denscombe, 2010a). From a critical realist perspective, the identification of entities which make up sample sets forms the basic theoretical building blocks of explanation. Each entity may be an organisation, a person, a process, a resource and so on. In this case entities included the textile collection companies, those people working for them and running them, sustainable fashion designers, brands and expert stakeholders, as well as consumers and users of clothing and textiles. Emphasis is placed on understanding the fundamental nature of such entities, rather than simply their measureable properties. (Easton, 2010).

This is made possible through a mixed methods approach from a critical realist perspective. In a quantitative sampling approach, a technique designed to eliminate bias is used, and generalisations are made from the sample to the wider population. For a qualitative approach to sampling, participants are selected purposively on the basis of how useful they are to the inquiry. Ontologically and epistemologically, quantitative methods focus on the tangible or empirical reality, using observations and empirical research to establish regularities through deductive or inductive reasoning. Qualitative methods can probe further into the intangible realities, such as the generative mechanisms at work in the real and actual strata of realities, using knowledge constructed from social interaction and understanding, interpreting meanings to gain a deeper comprehension of the causal mechanisms producing empirical observations. (Bhaskar, 1978; McEvoy and Richards, 2006). Ethical protocols were also accounted for during sampling procedures. Non-disclosure agreements, interview consent forms and transcripts of internet and audio based verbal consent agreements have been made available in Appendix F, pages 623 to 652.

3.5 Research Design

An overview of the mixed methods research design developed for this study is shown in Figure 13. Primary data collection was conducted in four phases using an exploratory sequential mixed method design, in which initial qualitative data collection and analysis informed subsequent quantitative data collection and analysis. (Creswell, 2014). In Research Phase 1, a review of literature on textile collection and fashion upcycling highlighted the interconnected

nature of a closed-loop system and identified areas worthy of further investigation regarding processing, design practice and communication. Following the review of literature in Research Phase 1; textile collection and circular economy fashion case studies were conducted on Research Phases 2 and 3. Analysis of the qualitative data from Research Phases 1, 2 and 3 informed the quantitative data collection in the consumer survey of Phase 4. In Research Phase 5, a synthesis of the findings and analysis from each prior research phase contributed to the formation of a conceptual framework for transitioning towards circular economy fashion. This led to the development of a communication strategy for circular economy fashion in Research Phase 6.

Aim 1 sought to analyse the current practices of post-consumer textile collectors. To fulfil this aim, three case studies of exemplifying textile collection firms were carried out during Research Phase 2. Semi-structured interviews with key informants from the waste textile management industry, structured observation and process modelling further documented sorting and grading activities and key themes within the industry. Longitudinal data on collection, production, sales and personnel were collected and analysed for one of the cases, in order to build a complete picture of the flow of value through a typical UK textile collection company. I&G Cohen were selected for longitudinal study based on their representativeness as a typical UK based textile collecting, sorting and grading company. As past participants of previous WRAP and DEFRA studies on textile recycling and collection, the convenience of being locally situated, being active members of the Textile Recycling Association and Recyclatex, plus a willing openness to share data for research purposes, I&G Cohen were ideal candidates. This longitudinal study enabled the identification of opportunities to elevate the value of products, and existing constraints within the system; thus allowing the recommendation of solutions to overcome such problems.

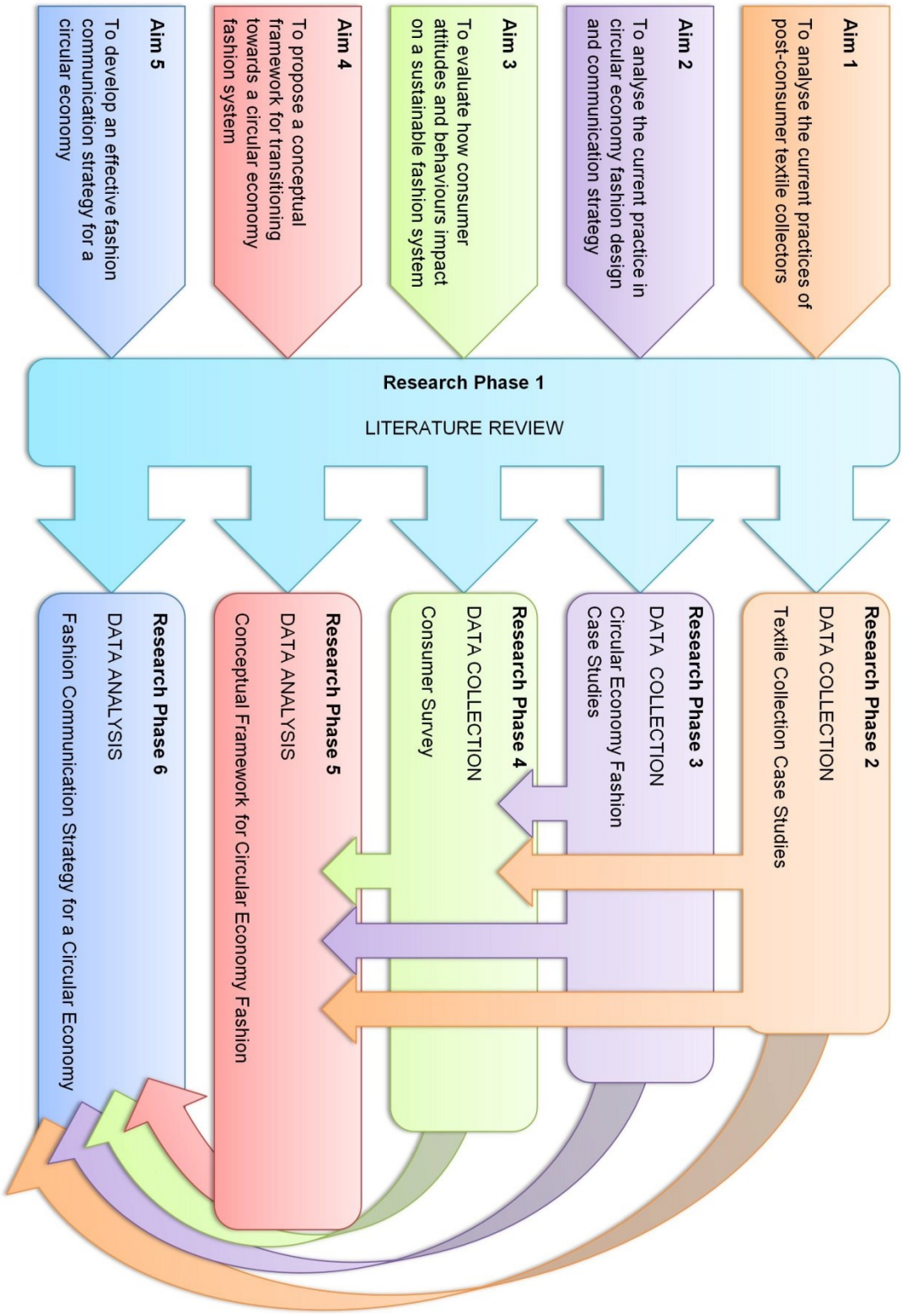


Figure 13. Research Design Overview

Aim 2 sought to analyse the current practice in circular economy fashion design and communication strategies during Research Phase 3. To meet this aim, eight ethical fashion brands and five expert stakeholders were identified as individual cases for this stage of the

research. Semi-structured interviews identified how the brands currently communicated their ethos to their consumers, what information it was important to know about consumers and areas in which they felt more understanding was needed. Expert stakeholders additionally informed the fulfilment of Aim 2, by providing a range of insights into the current issues faced by the ethical fashion industry. Where applicable, designers also gave insights into their employment of a circular economy fashion design process and how this related to their communication strategy. Building on a model developed during a study investigating upcycling in the UK womenswear industry (Han, 2012), interview questions also collected feedback from designers on how faithfully the initial model represented their current design and production processes. This feedback was further developed into a more representative model that could be used when considering scaling up circular fashion strategies.

The focus of Aim 3 was to evaluate how consumer attitudes and behaviours impact on a sustainable fashion system. To fulfil this aim, qualitative insights from informants in Research Phases 2 and 3 of the study established gaps in their consumer knowledge and indicated which lines of inquiry to pursue through quantitative investigation, in line with the exploratory sequential mixed method approach utilised. Along with critical areas highlighted through literature this further contributed to the development of a survey questionnaire during Phase 4. Areas of focus were fashion shopping behaviour; garment use and divestment; fashion influences and information; outlook on fashion consumption and ethics. A sample of consumers with an interest in fashion shopping was made available through internet based social networks and the survey was distributed through online snowball sampling.

Aims 4 and 5 drew together the strands of research and analysis of the study to form a framework and strategy which contribute to further knowledge and understanding of sustainable fashion business. Aim 4 sought to propose a conceptual framework for transitioning towards a circular economy fashion system. This was carried during Research Phase 5 of the study. To fulfil this aim, data derived from Research Phases 1, 2, 3 and 4 (literature review, case studies, interviews and consumer survey) were synthesised and analysed in order develop a framework which reflects an integration of circular economy fashion strategies into mainstream production and retailing, critical for sustainable business practice. The focus of Aim 5 was to develop an effective fashion communication strategy for a circular economy. This was carried out during Research Phase 6 of the study by determining the necessary requirements to effectively connect with consumers regarding sustainable fashion consumption and behaviour change. This strategy was developed from synthesising and analysing data obtained in all prior phases of the study as shown in **Error! Reference ource not found.**.

3.6 Research Phase 1: Literature Review

In order to analyse the issues surrounding current practices in circular economy fashion and textiles systems, a literature review first analysed global sustainability initiatives and sustainable design strategies such closed loop manufacturing. Waste policies and management were also covered, including textile waste, collection and value adding strategies such as recycling and upcycling. The review then moved on to the fashion industry and its economic, social and environmental impacts, plus its retailers, brands and consumers. Consumer perspectives took in demographic and psychographic information, plus behaviour motivators, purchasing and divesting, and attitudes to ethical fashion. Analysis of the reviewed literature enabled the identification of key areas for consideration and formed a basis for primary data collection techniques, such as developing interview questions.

3.7 Research Phase 2: Textile Collection Case Studies

A critical realist case study method firstly identified the phenomena to be studied, (the circular economy fashion and textiles industry) before questioning the cause of outcomes and events associated with the phenomena, such as textile collecting, sorting and grading activities and the production and promotion of ethically and environmentally motivated fashion. A case study is a mixed methods research strategy which entails the detailed and intensive analysis of a single case to understand complex factors in a particular real world setting (Denscombe, 2010b; Bryman, 2012; Yin, 2014). Easton (2010) states that 'a critical realist case approach is particularly well suited to relatively clearly bounded, but complex, phenomena such as organisations, inter-organisational relationships or nets of connected organisations.' In this way an opportunity to study things in great detail is offered, and understanding of the interconnected and interrelated nature of relationships and processes in social settings reveals the complexities of a given situation (Denscombe, 2010b).

Entities and objects which characterised the phenomena were then identified, recorded and analysed in relation to what was regarded to be required to explain the causal mechanisms in place. The case study method allowed the investigation to retain the holistic and meaningful characteristics of the real life events studied (Yin, 2009), which in this instance consisted of the collecting, sorting and grading activities related to post-consumer clothes and textiles. The case study approach allows qualitative methods such as observation and interviewing to generate intensive, detailed examinations of a case, however often both qualitative and quantitative methods can be employed (Bryman, 2012). Eisenhardt (2010) states that 'case studies typically combine data collection methods such as archives, interviews, questionnaires, and observations' and that the evidence may be qualitative, quantitative or

both. Interpretation of data took place with an understanding of the differences between the empirical, the actual and the real, and that data was collected from and about people, processes and material objects, leading explanations to have been fundamentally interpretivist in nature. It was necessary then for the researcher to understand and interpret the subjects' understandings of the entities referred to during interviews. Using a process of retroduction to identify the causal mechanisms behind what was observed and recorded required iterative cycles of data collection, using a mixed methods approach. (Easton, 2010).

3.7.1 Research Phase 2: Sampling Procedure

In selecting the cases for study, each unit of analysis was defined as each textile collection firm or each sustainable fashion brand or expert. Through purposive sampling, three cases were selected as being representative of typical textile collection firms in the UK as outlined in **Error! Reference source not found.**. Purposive sampling is a form of non-probability ampling in which participants are selected in a strategic way, so that those sampled are relevant to the research questions that are being posed, based on the researcher's judgement (Bryman, 2012; Dadigamuwage, 2012). In this way, researchers may decide to select participants on the basis of an explicitly stated criteria (Lindlof and Taylor, 2011). Each firm selected carried out their own collecting, sorting and re-selling activities, often as a result of charity association. As stated by Bryman (2012) representative or exemplifying cases are chosen with the objective of capturing every day or commonplace situations rather than extreme or unusual occurrences. Individual cases are selected because they epitomise a broader category or population of cases which they are a member of (Bryman, 2012). Criteria suggested by Creswell (2014) includes: where the research will take place, who will be observed, what they are doing and how they go about this. The firms selected were I&G Cohen (IGC) in Salford, TRAID in London and LMB Textile Recycling (LMB) in London. IGC were also chosen as a longitudinal case, as the opportunity to study this company over time on multiple occasions was presented by their willingness, availability and geographic proximity. The director of IGC, the retail product manager, education officer, a shop manager and a former designer at TRAID, and director of LMB were all interviewed in order to obtain key insightful view-points of the industry and inform the research.

Table 1. Textile Collection Case Study Companies	
IGC (Phil Geller, Elliot Cohen, David Johnson)	A medium sized and family run Salford based textile collection firm collecting from throughout the UK. A member of the Textile Recycling Association and Recyclatex, with their own vintage wholesale outlet. (www.igcohen.com, 2013).
TRAID (Claire Dawson, Sarah Klymkiw, Zita Varga)	A London based charity organisation operating a network of textile banks and charity shops to collect items and raise money for overseas development projects, with an in house upcycled fashion brand. (www.traid.org.uk, 2015).
LMB (Ross Barry)	A London based family run business collecting textiles from local authority waste sites and textile banks throughout the UK. LMB also operates their own industrial wiper business. (www.lmb.co.uk, 2015).

3.7.2 Research Phase 2: Data Collection Methods

In order to collect data relevant to the fulfilment of Aim 1, and to contribute towards Aims 3, 4 and 5, three case studies of UK based textile collectors were carried out. These collectors were analysed in terms of their activities in order to assess what potential there exists between the business activities of textile collectors and circular economy fashion. Questions were raised about how each business went about collecting, sorting, grading, processing and selling on textiles which had been donated or discarded by the general public. Inquiries were also made about the potential for upcycling at these organisations and what their previous experience of the practice and value of upcycling was. Each case exemplified a typical textile collection firm and were thusly appropriate to the research. One firm was also made available as both an exemplifying and longitudinal case and research with this company involved multiple observations and access to company archive data. Questions were also asked to establish any insights that the case study informants were able to give towards what information should be sought from consumers about their attitudes and behaviours on purchasing and discarding clothes, in order to collect data relevant to the fulfilment of Aims 3 and 4.

3.7.2.1 Structured Observation

In each of the textile collection cases of this study, structured observation at the collection sites took the form of site visits, observation of processing activities, photographic documentation of activities and walking alongside the flow of processing activity, in order to best document which processing activities took place at which stage. Structured observation is a research technique for the systematic recording of behaviour. Strategic decisions are made on what behaviour is observed and recorded for a specific period of time in the 'observation schedule'. The aim of this systematic recording of behaviour is to collect data that can be aggregated with all those in the sample (Bryman, 2012). To complement this systematic approach, field notes and impressions were recorded on what processing was taking place, where in each site, how often and how many people were performing these tasks, in order to contextualise the data (Denscombe, 2010b). These observations enabled models to be constructed of the processing activities and flow of material. Jankowicz (2000) recommends checking the frequency and distribution of phenomena in order to create the categories for recording behaviour. For example, in a study on the potential for the wider use of recycled synthetic materials in UK High Street clothing markets Nakano (2010) used direct observation when visiting companies participating in the research. This enabled extra evidence to be obtained outside of the interviews, which was then used to support the initial findings. Once structured observation had been carried out, flow charts and business process models were constructed to provide a framework of comparative analysis for the observations, relating to the factors and influences in the organisations being studied.

3.7.2.2 Longitudinal Company Archive Data

To ascertain the varying levels of value streams created by typical waste textile collecting activities in the UK, company archives at I&G Cohen were accessed to obtain data throughout the three year study on textile collections, processing, sales, pricing, costs and personnel. This enabled large amounts of high quality data from a single case to function as a representative sample. In this way, secondary data which was not collected for the purposes of this research was able to be treated as primary data showing evidence of company activities from a credible source. (Thomas, 1997; Denscombe, 2010b; Bryman, 2012). This information was combined with the observational data of the company activities to produce process flows which modelled value streams created by textile collection activities in this case study. As stated by Denscombe (2010), 'the case study approach allows the researcher to use a variety of sources, types of data and research methods as part of the investigation.' Whatever is deemed appropriate should be used for investigating the relationships and processes that are of interest (Denscombe, 2010b). As a systematic and orderly approach towards the collection

and analysis of data, issues in the past and present are explored as they affect an individual, group, organisation or group of organisational units, as in a comparative case study (Jankowicz, 2000).

3.7.2.3 Semi-Structured Interviews

Interviews function as a data gathering technique in qualitative research by following a set of assumptions outside those of a normal conversation. The interviewee first gives consent to take part and for the recorded material produced to be attributed to them as part of that research. There is also a tacit understanding that the agenda for discussion will be set by the researcher. (Denscombe, 2010b). In return, the interviewer must allow the conversation to lead to new discoveries and assure the informant that they can speak freely, without being challenged or contradicted. Yielding some control of the process in this way gives informants agency to direct the dialogue, creating an open and non-judgemental setting. (Lindlof and Taylor, 2011). Where structured interviews involve tight control over the format of the questions and answers, semi-structured interviews greater allow flexibility in questioning, and gather a greater depth of information in the open-ended answers elicited from informants.

Interviews are particularly effective when employed to gain insights into people's opinions, feelings, emotions and experiences, or to elicit privileged information from key informants (Denscombe, 2010b). The key informants are people whose insightful knowledge is valuable in achieving the research objectives (Lindlof and Taylor, 2011). Lindlof & Taylor (2011) cite the characteristics of these informants as often, but not always, being: veterans of the scene in question, experienced in many roles, well respected and well versed in the culture and language of that scene. In this way, these experts provide a reliable source of institutional memory and key perspective on the network in question. Semi-structured face-to-face interviews were carried out with key informants who held specialist knowledge, valuable in achieving the research objectives (Lindlof and Taylor, 2011). This form of data collection chiefly deals with the informants own perspectives and view-points. As suggested by Jankowicz (1995), topics and issues covered in semi-structured interviews should be determined in advance; as are the key informants to be interviewed.

3.7.2.4 Interview Schedule: Development of Questions

As the informants varied in role and level of responsibility at each interview opportunity, so the interview schedule and list of questions also varied to most appropriately match what data could be collected from each specific informant. A flexible and conversational questioning style and structure was concluded to be the most appropriate in order for the interview to flow naturally, utilising a loosely ordered schedule of open-ended questions and topics to further

interrogate and clarify critical responses. As stated by Bryman (2012), flexibility in responding to how the informants were directing the interview was also necessary. This could lead to a change in the emphasis of significant issues or a departure from the schedule of topics and lead to new questions, however, a basic structure was still maintained between samples in order to ensure cross comparability between multiple cases. (Bryman, 2012). Topics covered in each of the interviews conducted as part of the textile collection case study research are detailed in Tables 2 and 3.

Table 2. Textile Collection Case Study Interview Schedules	
IGC (Phil Geller, Director)	• History, background, ethos and future plans. • Collections: Sources, sites, methods, quantities, seasonality. • Processing: Sites, productivity, staff training, • Sales: Customer orders, market information, charity association, product value, demand, new product development, trade relations and political considerations, distribution and export, vintage sales, marketing. • Consumer study: Are there any questions you think should be asked to consumers about how they buy, consume and discard or donate clothes?
TRAID (Claire Dawson, Retail Product Manager)	• Collection: Banks, locations, methods, quantities, seasonality, donations. • Processing: Quantities, staff, methods, criteria, categories. • Sales: Shops, stock criteria, export. • Upcycling: TRAIDremade, time, value, process, sales.
TRAID (Zita Varga, Dalston Branch Manager)	• Customers: Demand, second-hand vs. vintage, typical profile. • Stock: Donations, decisions, quantity. • Upcycled stock: Sales, consumer reception, communication, promotion. • Consumer study: Are there any questions you think should be asked to consumers about how they buy, consume and discard or donate clothes?

Table 3. Textile Collection Case Study Interview Schedules continued	
TRAID (Sarah Klymkiw, Education Officer)	• Upcycled collection: Design & designers, production, sourcing, • Consumers: Engagement, expectations, information, criteria, charity considerations • Education: Discussion events, practical skills, school, universities, workshop events. • Consumer study: Are there any questions you think should be asked to consumers about how they buy, consume and discard or donate clothes?
TRAID Clare Farrell, former designer for TRAIDremade	• Promotion: Communication to customers, fashion promotion, editorial, image, consumer understanding, consumer feedback. • Sales: Sales strategy, outlets, price. • Design: Designers, strategy, production, consumer appeal, sourcing.
LMB (Ross Barry, Director)	• Collections: Sources, quantities, reliability, quality, locations. • Processing: Daily figures, processing activities, grades, sorting, bales. • Sales: Customer countries, legal issues.

In designing questions for informants, interview schedules provide a clear outline of the topics and a preferred order for asking questions, although this will not necessarily need to be rigidly followed for more unstructured interview styles. The context and social dynamics of an interview may call for rephrasing and restructuring of the questions and order. (Lindlof and Taylor, 2011). In preparing an interview guide for a semi-structured interview, Bryman (2012) recommends first keeping in mind what it is that needs to be found out from the interviewee in order to answer the research questions. With this in mind, the process then entails creating

an order of topics, so that the questions flow well, and formulating the interview questions in a way that will help answer the research questions, but being prepared to alter the order of the questions during the actual interview. Practical considerations include a clear use of language, not asking leading questions and ensuring to record specific contextual details about the identify and position of the interviewee. (Bryman, 2012). In this study, interview schedules provided a flexible guide to the order and flow of questioning for each interview. A mixture of different kinds of questions allowed for the understanding of the way informants understood issues related to the research topics, but still allowed for the flexibility in following alternative areas of inquiry during the course of the interviews. (Bryman, 2012).

3.8 Research Phase 3: Circular Economy Fashion Case Studies

In order to collect data relevant to Aim 2, interviews with eight sustainable fashion brands with experience of designing, producing or retailing upcycled or ethical fashion were carried out. Questions centred on how the brands currently communicated their ethos to their consumers, what information it was important to know about consumers, areas which they felt more understanding was needed and how representative an upcycling process model developed in a previous study (Han, 2012) was for the practice of current upcycled fashion practioners. This established any insights that the informants were able to give towards what information should be sought from consumers about their attitudes and behaviours on purchasing and discarding clothes, in order to collect data relevant to the fulfilment of Aims 3 and 5. Interviews with five expert stakeholders further informed the fulfilment of Aims 1, 2, 4 and 5 by providing a range of insights into the current issues faced by the ethical fashion industry.

3.8.1 Research Phase 3: Sampling Procedure

Ten brands were selected to represent the range of market levels present in the fashion industry and five expert stakeholders were selected based on their specialist knowledge, experience of the industry and distinct and varied perspectives, to give a broad range of viewpoints from the most forward thinking areas, as outlined in Tables 4, 5 and 6. The brands ranged from higher profile labels that had shown regularly on and off schedule at London Fashion Week, to medium sized enterprises with their own bricks and mortar premises, smaller labels and start-ups, producing limited collections for loyal customer bases, mainly reached through social media, and one charity retailer. Designers, brand owners, a retail manager, sustainability consultant, academics, an activist and closed-loop production specialists were contacted to be interviewed for this phase of the research. Expert stakeholders included a fashion industry corporate social responsibility specialist, an artist and

mending activist and academic, and upcycled and sustainable fashion expert and academic and a researcher and closed loop production expert from a former upcycling brand, now developing a closed loop textile process.

Table 4. Circular Economy Fashion Case Study Participants **(Brands and Expert Stakeholders)**	
Upcycling Fashion Store, Berlin **(Arianna Nicoletti)**	A well-established Berlin based business that displayed and retailed upcycled fashion and jewellery from all over Europe and provided a network hub for the local sustainable design community. (upcycling-fashion.com, 2015).
No Such Thing **(Clare Farrell)**	A micro sized ethical cycle wear enterprise based in London. The owner and director of this brand had previously held roles designing collections for two different London based upcycled fashion brands. (www.nosuchthing.clothing, 2015).
FARA Workshop **(Anna Crawley & Grace Clark)**	A London upcycled fashion label of a UK based charity raising money for vulnerable children in Romania. Both the head designer and creative director were interviewed. (www.thefaraworkshop.org, 2015).
THTC **(Gavin Lawson)**	A well-established organic clothing line from London, produced under ethical conditions in China and printed in the UK. The brand specialised in printed organic cotton and hemp t-shirts. (shop.thtc.co.uk, 2015).
Goodone **(Nin Castle)**	A high profile upcycled fashion brand based in Spain and the UK, with production in Bulgaria. The brand also functions as a consultant and facilitator for outsourced ethical and upcycled production in Bulgaria. (www.goodone.co.uk, 2013).
Here Today Here Tomorrow **(Julia Crew &** **Anna Maria Hesse)**	A collaborative studio shop in London that is used to design, showcase and sell sustainable and ethical fashion and accessories, focusing on high quality handmade craftsmanship, fair trade, and transparency of production. (www.heretoday-heretomorrow.com, 2015).

Table 5. Circular Economy Fashion Case Study Participants continued. **(Brands and Expert Stakeholders)**	
Antiform **(Lizzie Harrison)**	A well-established micro-enterprise upcycling brand based in Bristol with a background in academic research informing sourcing decisions. This brand manufactured and produced through a network of local UK makers and artisans. (www.antiformonline.co.uk, 2015).
From Somewhere **(Orsola de Castro)**	A high profile upcycling brand, known for campaigning and public engagement, and pioneering collaborations between educational institutions and upcycling innovators. Based in London with production in Italy. (www.fromsomewhere.co.uk, 2015).
TRAID / TRAIDremade **(Claire Dawson, Sarah Klymkiw, Zita Varga)**	A London based charity which raised money to fund international development projects to improve working conditions in the global textile industry. The charity operates an award winning in-house upcycling label TRAIDremade. (www.traidremade.com, 2012).
VInspired **(Jayne Cartwright)**	A London based charity working with young people through skills development and community projects. The charity operates the Goodstock shop in Manchester, which sells trend led second hand clothing. (vinspired.com, 2016).
Red Mutha **(Red Curtis)**	A small independent UK upcycling brand based in Brighton, specialising in customised tailored jackets. A niche brand with a small but well established following including some well known UK musicians. Stocked in the UK and internationally. (redmutha.com, 2016).
Christian Smith, Inclusi	Smith had a background in sustainable business practice in the fashion industry, having devised and implemented the first corporate social responsibility strategy for a major UK based online retailer. Now based in New York and working as an independent advisor. (www.inclusi.co, 2015).

Table 6. Circular Economy Fashion Case Study Participants continued. **(Brands and Expert Stakeholders)**	
Jonnet Middleton, **Lancaster University**	Middleton had a background in fashion design and academia, and was currently working as an artist and mending activist, having founded organisations to map mending practice and devise a critical agenda for mending research. Now based in Cuba. (www.futuremenders.com, 2012; www.lancaster.ac.uk, 2015).
Sass Brown, **Fashion Institute of Technology, New York**	Brown was an ethical fashion educator and writer, with a background in design and academia, having published several well received books on sustainable design practice. Now based in New York and pursuing further research into artisanal craft skills. (www.ecofashiontalk.com, 2015).
Mel Knudsen & Cyndi Rhoades, **Worn Again**	Knudsen and Rhoades were a researcher and a founding executive from a closed-loop production company based in London, researching and developing a technique to enable end-of-use clothes and textiles to be processed back into new yarn, textiles and clothing. (wornagain.info, 2015).

3.8.2 Research Phase 3: Data Collection Methods

Semi-structured interviews, as covered in Section 3.7.2.3, were carried out with key informants from eight out of the ten ethical fashion brands who held specialist knowledge, applicable to the research goals, five expert stakeholders and appropriate key informants from the textile collection organisations. Additional informal communications in the form of emails and face to face discussions were also carried out with several of these brands and additionally with one UK based upcycling brand and one charity retailer. Designers and brand owners were selected from brands which ranged in size and profile; to be representative of the range of market levels present in the fashion industry. Informants and questions were determined in advance. Topics centred around how the brands currently communicated their ethos to their consumers, what information it was important to know about consumers, areas in which they felt more understanding was needed and how representative an upcycling process model developed in a previous study (Han, 2012) was for the practice of current upcycled fashion practioners. In flexible semi-structured interviewing style, questions varied between respondents to reflect

what data could most appropriately be collected from each specific informant and how interviewees were directing the flow and emphasis of the data gathering. (Jankowicz, 1995; Lindlof and Taylor, 2011; Bryman, 2012). A clear schedule of issues to be addressed and questions to be answered was still present, but informants were encouraged to elaborate on points of interest and speak more widely on the issues raised. Semi–structured interviews also allow development of the questions and discussion between each interview as a result of information given in previous interviews and an indication to follow new lines of inquiry (Denscombe, 2010b). As recommended by Jankowicz (1995), early informants were involved in determining the questions and topics that consecutive informants were asked, as early transcripts were analysed and reflected upon, and used to include additional considerations flagged up.

Table 7. Circular Economy Fashion Case Study Interview Schedules	
Fashion Brands	• What do you think is the most important thing for upcycling / ecofashion / sustainable clothing designers / brands / shops / retailers to know about their consumers? • What would you like to ask fashion consumers who do not currently buy upcycled or ecofashion? • How do you currently get information about (your) customers' opinions? • What do you think about the way ecofashion information is communicated to consumers by the media? • Are you able to profile your typical customer (of your brand)? • Are you able to profile your ideal customer (for your brand)? • What do you think motivates your brand's typical customer? • How do you communicate the ethos of your brand to the public? • Do you offer your customers any services post-purchase? • How important do you think garment design and style are compared to sustainability criteria? • Do you think that your customers feel the same? • Do you think that fashion consumers in general feel the same? • Would you be interested in collaborating on further research? • How representative is the upcycling model of your own design and production process?

Table 8. Circular Economy Fashion Case Study Interview Schedules continued.	
Expert Stakeholders	The mainstream fashion industry: • Role and experience, influence, implementing sustainability, consumers, ecofashion sales, ecofashion sourcing, CSR, innovation, media, celebrities, responsibility. • Mass production and attachment, critical path and disruption, consumers, media. • Implementing sustainability, fashion cycle, celebrity. Consumers: • Responsibility, information for brands, communication. • Preconceived ideas, understanding. • Understanding of closed loop, understanding of ethical and sustainable fashion. Sustainable fashion: • Importance, sourcing, government responsibility, take back schemes, design practices, brand responsibility, future of sustainable fashion. • Responsibility, implementation into the mainstream, emotional durability, upcycling and mending: place in industry / society. • Upcycling, marketing, consumers, government, education, subsidies, labelling, tax, media, take back schemes, brands. • Media Design: • Importance for sustainability, creativity. • Designer responsibility.

3.9 Research Phases 2 and 3: Data Analysis

In analysing case study data, searching for patterns and seeking ways of displaying the data which may point to new insights, Yin (2014) recommends using one of four strategies, of which the 'descriptive framework' strategy was employed for this study. This enabled data to be analysed comparatively, allowing similarities and contrasts to emerge. This directed the categorisation of data into themes relating to what was observed and in relation to literature (Yin, 2014). The data gathered through the semi-structured interviews in Phase 2 and Phase 3 was first analysed using thematic analysis and coding. Qualitative data collection resulted in large amounts of rich data in the form of interview transcripts from textile collectors, designers, brands and experts stakeholders. Bryman (2012) proposes several strategies for qualitative data analysis:

- **Analytic induction**, in which hypotheses are redefined with each case of data collection.
- **Grounded theory**, an iterative approach which aims to generate theory from data.
- **Thematic analysis**, a form of analysis which seeks to extract key themes from the data.
- **Narrative analysis**, which is sensitive to the temporal sequence events are recalled in the data.

For this study, thematic analysis was chosen as this allowed themes to emerge from the data through the technique of coding. Coding the data involved reviewing the transcripts and field notes. Data was broken down into key units of analysis which represented the component parts of what was said. Labels were assigned to component parts that seemed to be of potential significance to the research themes or theories from literature. Each unit of analysis was categorised into a code which represented recurrent considerations highlighted within the interview data. Codes were used to separate, compile and organise the data and to represent sets of themes and concepts which were illustrative of the key points and areas for consideration. This was an important first step in interpreting the data. Codes were also not fixed and subject to change and revision as was appropriate. (Bryman, 2012).

In this way data was treated as potential indicators of concepts or classes of events or behaviours. From these indicators, concepts could be generated, which were used to build theories. Concepts which represented real world phenomena and could be elaborated on became categories of their own. After coding, data was then ordered and synthesised in a

framework matrix to display quotations illustrative of the key themes. The search for themes is one which can be discerned for most types of qualitative data analysis and is reflective of an awareness of recurring ideas and topics in the data. Qualitative data analysis software NVIVO was used to facilitate thematic analysis of the interview data by providing an interface with which to categorising the themes and concepts. In the NIVIO programme, 'nodes' are ways of coding the data into specific categories or themes. A node is made for each category, theme, idea and concept expressed in the data. Figure 14 shows a screen shot of how the data was systematically categorised into 'nodes.' (Bryman, 2012).

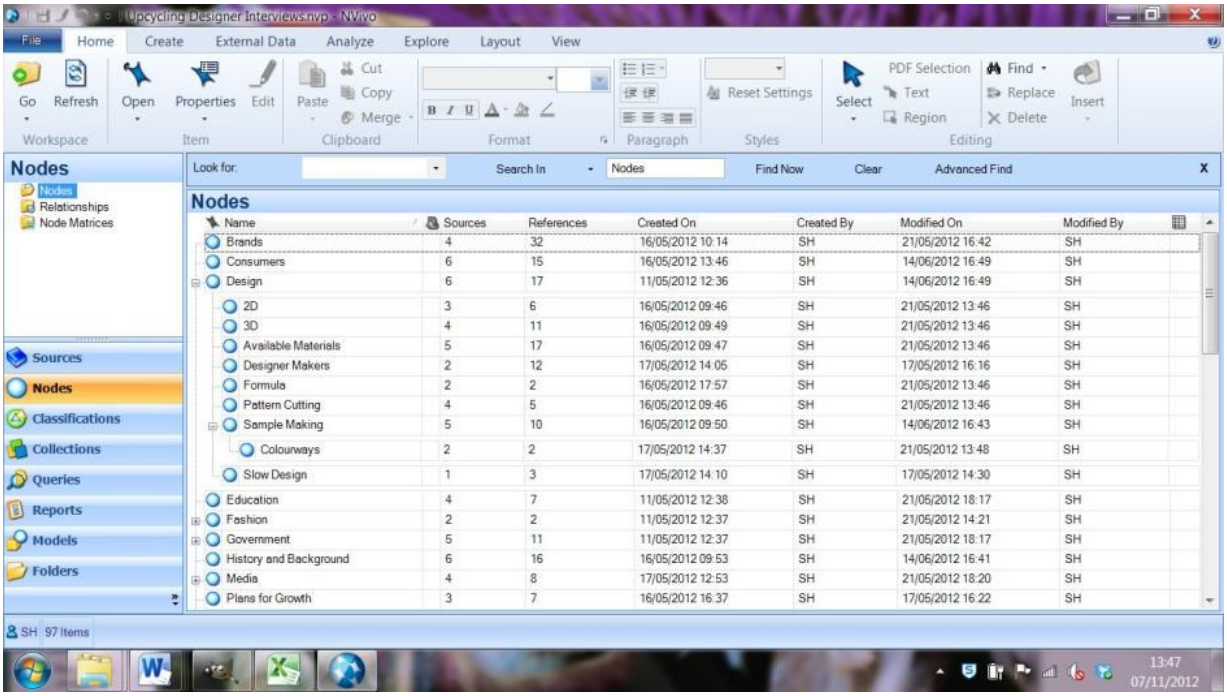


Figure 14. NVIVO Nodes

Coding enabled to the data to be shown as representative summaries and illustrative quotes, which were then tabulated into categories for cross-case synthesis, in which cases were analysed comparatively by the categories they were profiled into. Before cross-case analysis took place it was also necessary to analyse within cases in order to organise the data into descriptive write-ups using the coded content categories. Initial within-case analysis held the advantage of reducing large volumes of data and allowing patterns from each case to emerge before general patterns across cases were identified. This process of familiarity with the data within-cases also expedited the cross-case analysis. (Eisenhardt, 2010).

The data gathered from the structured observations and designer interviews led to the creation of process models, which, similarly to the logic models described by Yin (2014), are a way of graphically displaying a sequential series of actions, with one action causing the effect of the next, and so on. Jacka & Keller (2009) describe this process as a way to graphically represent

the transactions and stories that make up a business. The use of models to display the observed data also allowed the comparison of findings with sequences and models from theory and literature and for the examination of any non-linear interdependencies and interrelationships.

For the longitudinal case study at I&G Cohen; process maps in combination with company archive data allowed the analysis of the flow of value through the company, and identification of the value-adding processes which made the final products more valuable to the end consumer than they otherwise would have been (Hines and Rich, 1997). Company archive from I&G Cohen showed information about collections, processing, and sales volumes, plus wage costs, collections costs and sales prices over two years. In analysing this information it was necessary to display the data in tables and graphs, in order to plot different variables against each other and against time, as in the time series analysis described by Yin (2014). Patterns over time were also noted at this stage. According to Thomas (1997), in order to obtain a realistic analysis of business applications, it is often necessary to consider the relationship between variables, than to analyse them singly.

3.10 Research Phase 4: Consumer Survey

An online survey questionnaire was used to fulfil Aim 3, to evaluate how consumer attitudes and behaviours impact on a sustainable fashion system. Surveys are an extensive quantitative or mixed methods research strategy used to gather information about a social phenomenon or trend in order to test or generate a theory; looking particularly at the context in which known generative mechanisms operate and recording measured aspects of this context. In this case, the social phenomenon under investigation was the impact of consumers on circular economy fashion. Characterised by wide and inclusive coverage, a survey is an effective way of capturing a snapshot at a specific point in time (June to October 2015) of how things are being experienced by the sample population (353 female fashion shoppers), gathering data which broadly characterises groups which are of interest in the study. For example, economic uncertainty may have been a factor affecting the consumer survey research, as individuals who may have once readily donated clothing for commercial recycling and reuse might currently be holding onto items for longer and passing them on to family and friends, or shopping for clothing less frequently or from lower cost retailers. This may be a culturally and historically representative feature of the social conditions the data were collected under. As well as recoding individual responses, it is important for the critical realist researcher to collect information about the groups in which respondents are located in order to effectively model the multiple levels in a population and make connection to the known or conjugated generative processes under study. (Denscombe, 2010b; Bryman, 2012; Edwards et al., 2014).

3.10.1 Research Phase 4: Sampling Procedures

For this phase of the research the population of units from which the survey sample was to be taken from was identified as all the female fashion shoppers within the sampling frame of the social media networks used to recruit participants. The sample is the segment of the population that is selected for investigation and the sampling frame is the listing of all units in the population from which to choose and contact the selected sample, such as employee records, membership lists, trade directories etc. (Denscombe, 2010b; Bryman, 2012). In order to select the sample, non-probability sampling makes use of techniques in which the researcher has an active role in selecting participants. Participants for the final data collection distribution of the survey were recruited through snowball sampling, in which referrals are made among participants who know of others who might take part.

Snowball sampling is a form of non-probability sampling in which referrals are made among participants who know of others within their social circle who possess some of the characteristics that are of research interest (Lindlof and Taylor, 2011). These chains of referrals create a growing pool of respondents over time, effectively 'snowballing' in size. Because of this snowball sampling is 'well suited to studying social networks and people who have certain attributes in common' (Lindlof and Taylor, 2011). Existing social structures in online social and business networks on Facebook, Twitter, LinkedIn and private organisation's email lists were used to reach as wide an audience as possible. As 'snowball sampling is a chain-referral technique that accumulates data through existing social structures', online social networks and email groups are ideal tools for recruiting research participants, as users are linked directly to their 'friends' and any special interest groups they identify with (Brickman Bhutta, 2012).

New technologies are 'changing the societal landscape in which researchers operate' and the ubiquity of social media provides researchers with 'new data collection tools and alternatives to more traditional data collection methods' (Murphy et al., 2014). The advantages to using social network sites to recruit a sample population are those of lower costs, less time spent gathering data, quality of data and greater efficiency (Brickman Bhutta, 2012). A single researcher can complete projects that may have previously required large teams or time spent contacting each respondent individually. Limitations are those associated with other forms of web-based research; those who do not use computers or have concerns about internet privacy are unlikely to participate (Brickman Bhutta, 2012). An online address link was generated by the survey software which linked directly to the self-completion questionnaire. Firstly, an event on Facebook was created, inviting participants who were female and shopped for clothes to take part in the survey on fashion and shopping, and provided the click through link to the

survey. Around 400 individual women were then invited to take part in the survey, and also asked to invite anyone they thought would also take part.

The survey was then reposted approximately twenty times in the first two days by those invited to the original Facebook event, boosting the numbers invited to participate by many hundreds. Links plus a short invitation to participate was then reposted on Twitter and LinkedIn as can be seen in Figure 15, and reposted again by others, again boosting numbers invited to respond. It is estimated that around 1000 women were contacted to participate, with 624 starting the survey and 351 completing all questions in full. It became clear at the start of survey that an initial disqualifier would be needed to limit the respondents only to females. This was carried out by using question 1 of the survey to filter out female respondents only, as this was the focus of the study. Using non-probability sampling it can still be possible to find a representative sample, however with any form of sampling, the risk of bias can be present if some members of the population stand less chance of being contacted than others (Denscombe, 2010b; Bryman, 2012).

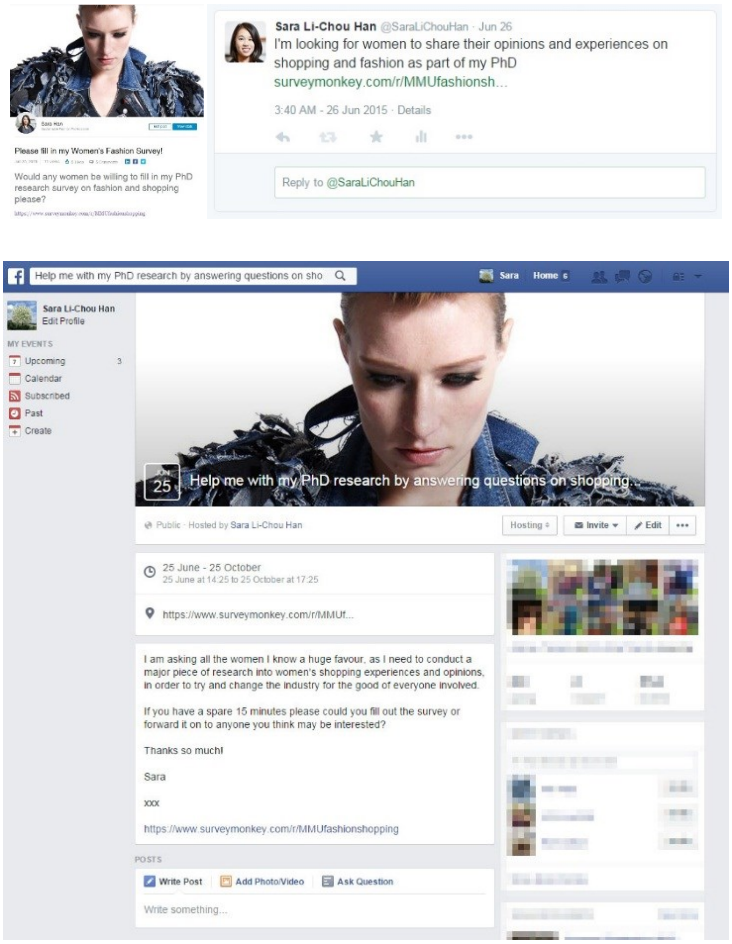


Figure 15. Social media requests for survey respondents (LinkedIn, Twitter and Facebook).

3.10.2 Research Phase 4: Data Collection Methods

Using a survey, large numbers of people can be questioned on their thoughts, feelings and behaviour in a relatively short space of time if the questions are kept straightforward and uncomplicated. Patterns of activity can then be identified within groups or categories of people and links can then be made to specific social groups. Methods for administering surveys can vary from postal, telephone, group, face-to-face, observational, archival or internet based forms (Denscombe, 2010b). According to Denscombe (2010), recent evidence indicates that the quality of data obtained through internet survey research is not significantly different from that obtained using more traditional methods, while also having the bonus of reducing time spent collecting responses, entering data and transcribing.

In order to meet the Aim 3, to identify consumer purchase and divestment attitudes and behaviours and establish what preconceptions may exist regarding sustainable fashion products it was necessary to conduct a consumer survey. This was carried out online and the sample population reached through online social networks. Areas of concern for collectors, upcyclers, brands, designers and experts expressed during prior interviews were used to inform and develop questions on the consumer survey.

3.10.2.1 Online Questionnaire

In this study an online questionnaire format was developed for the consumer survey, used to gather data on consumer attitudes and behaviours relevant to a sustainable fashion system. Questionnaires are a data gathering instrument used in survey research to collect information which can be used for subsequent analysis (Denscombe, 2010b; Bryman, 2012). An identical set of written question was presented to each respondent, which asked them directly about the points concerned with the research, without trying to lead respondents, change attitudes or provide new information (Denscombe, 2010b). Self-completions questionnaires require respondents to answer questions by completing the questionnaire themselves, unlike a structured interview, which could be considered a form of questionnaire that is administered on a face-to-face basis. As the questionnaire was not administered by an interviewer, questions were necessarily straight forward and easy to follow. The length of the questionnaire was designer to be as short as possible to avoid respondents tiring of answering questions and abandoning the task, while still asking enough questions to gather the required data. Due to this format, questionnaires were suitable for gathering standardised and quantitative data, with set answers and fewer open questions. (Denscombe, 2010b; Bryman, 2012).

Questionnaires provide a relatively cost effective way of obtaining information from a large sample (Thomas, 1997). Additional advantages also include a shorter timeframe for administration, avoiding bias from the interviewers presence, identical questions asked each time and convenience for the respondents. Some disadvantages may arise if respondents have difficulty answering the questions, without the researcher present to assist. (Bryman, 2012). Care was taken when designing the questionnaire to provide clear presentation and clear instructions on how to respond (Bryman, 2012). Questions and answers were kept together, and only questions which were vital to the research were asked (Denscombe, 2010b; Bryman, 2012). It was made clear what the purpose of the questionnaire was to respondents and the institutional affiliation of the researcher. Indications about the length of time it will take to complete were also made available to respondents. (Denscombe, 2010b). Internal testing and a pilot study ensured questions were understandable and answerable and the format and design suitable (Thomas, 1997).

3.10.2.2 Development of Questions

After speaking to 17 separate upcycling designers, sustainable fashion retailers and experts, textile collectors and charities, the emerging themes for consumer enquiry were shopping habits, wardrobe habits; including disposal, general attitudes on shopping and discarding and divestment, as well further enquiry into demographics and lifestyle habits and whether consumers really care about the provenance of their purchases and the stories attached to how their clothes were made, where they had come from and who they had been made by. Regarding shopping habits, the interviews revealed that those within the sustainable fashion and textile recycling industries are most interested in finding out whether consumers have any genuine interest in the ethics of their garment purchases at all. There is also great interest in learning what consumers are buying, their criteria when choosing it and their reasons for making the purchases. Also high on the agenda for inquiry are how much consumers care about price compared to style and design, as well as ethics. Inquiries into how much is bought, how regularly and whether factors such as fabric and fibre type and garment quality concern consumers were also flagged as useful.

Areas for enquiry from the interviews regarding wardrobe habits were split between how long consumers keep and wear their clothes and what they do with them once they have finished with them, such as discarding, donating, selling or passing on to friends and family. Questions were also raised over why consumers chose to donate some items and not others, and the reasons why some items were only deemed suitable for disposal in household waste bins. Further enquiry into consumer understanding of textile recycling information and their ways of finding the information were also thought to be key areas. Looking into consumer attitudes

and outlooks raised questions again on how consumers made decisions when buying, discarding and using their clothes. How consumers received their information, what pre-conceptions they might have about sustainable fashion and textile recycling, and what current consumer knowledge and understanding of these issues are were all thought to be of interest and use.

Literature regarding consumer behaviour indicated that essential areas in which to collect data were demographics categories, psychographic characteristics, behaviour motivators and sustainable fashion consumption attitudes and divestment behaviour, in order to answer the research aims. These areas aligned well with the areas identified by the interviews of shopping habits, wardrobe habits, divestment, provenance concerns and demographics. Survey questions were also developed taking into account feedback from a fashion marketing and consumer research expert within Hollings Faculty at Manchester Metropolitan University, and feedback from ten pilot study respondents. Changes made on the advice of the consumer research expert included the format and grouping of questions by theme, changes to the structure and wording of questions, and simplifying the way they were answered. A full transcript of the survey questions is included in Appendix E, Section 10.5.1, pages 392 to 414.

3.10.2.3 Pilot Study

A pilot study was carried out in order to fine tune the consumer survey for clarity and ease of use, and to spot any mistakes and weaknesses of the survey design prior to the main data collection. Bryman (2012) advises that piloting not only ensures that survey questions function well, but ensures that the research instrument as whole operates well. The pilot study was useful in refining the questions and identifying any superfluous areas or any areas which needed more attention. For this self-completion questionnaire, it was determined that piloting was particularly important as a researcher could not be present to facilitate when respondents were answering (Bryman, 2012). Participants for the pilot were selected through convenience sampling, in which the nearest and most available participants who met the initial criteria of being female and having shopped for clothes was met. It was decided that at least one hundred respondents were needed for the final survey in order to measure statistical significance accurately. With this in mind ten staff and research students from Manchester Metropolitan University participated as the pilot sample, to be representative of at least 10% of the final sample population. The survey was taken in its intended online format, which allowed for it to be piloted in as close a way as possible to its final outcome while still allowing for changes to be made before the final data collection distribution. Pilot survey respondents were asked to take the survey online at their own computer terminals while also recording how

long it took and giving feedback on how they felt the questions flowed and were phrased, and the general order and structure of the survey.

3.10.2.4 Pilot study results

Figure 16. Pilot study completion times

Respondent	Complete or Incomplete	Time taken (minutes)
1	COMPLETE	38
2	COMPLETE	22
3	INCOMPLETE	13
4	INCOMPLETE	163
5	INCOMPLETE	7
6	COMPLETE	56
7	COMPLETE	38
8	COMPLETE	24
9	COMPLETE	35
10	COMPLETE	14

Figure 17. Feedback from pilot study respondents

"It would be useful if you stated how long it would take to complete the survey at the beginning."

"Fully explain the purpose of the survey. Just saying attitudes and habits might not be clear."

"Overall good questions, but too many I think?"

"Put demographic questions at the end to save time. Longer questions on attitudes etc. should be at the beginning where people have more time to read them."

As can be seen in Figure 16, three respondents abandoned the completion of the survey. For the seven respondents who did complete the survey in full, the average time taken was 32 minutes. Respondents also commented on which questions were easy to answer and which were more complicated. Comments on the overall experience are presented in Figure 17. As a result of these comments and feedback numerous changes were made to the online survey,

including length, structure, order, editing of questions and correction of mistakes. Most notable was the decision to reduce the completion time of the survey from over thirty minutes to under twenty minutes, in order to prevent abandonment mid survey. This was done by omitting some questions, streamlining others with simpler answers and creating better 'tick box' options. Another notable suggestion was to move the demographic questions to the end of the survey. Although vital to the analysis of the results, demographic answers are considered much easier for respondents to answer towards the end of the survey, when they may be tiring, than questions which require decisions or memory.

3.11 Research Phase 4: Consumer Survey Data Analysis

The survey data was subjected to quantitative data analysis in which descriptive statistics were used. This enabled the profile of the findings to be described, connections between parts of the data to be explored and findings to be summarised and displayed in tables and charts. Numerical data, such as nominal demographic data or ordinal Likert scale answers, were used to describe frequencies, percentages and averages. Patterns and relationships were also noted in the data where connections could be shown, and tests of association and difference measured the level of significance between variables. (Denscombe, 2010b). Statistical analysis software package SPSS was used to interrogate the data for patterns of association and correlations. The survey data collected consisted of categorical variables, made up of a number of categories of distinct entities, such as age groups, education level and gender. These were represented as nominal variables, in which numbers were used as a code to represent names of categories.(Field, 2013)

Descriptive statistics were used to describe the characteristics of the survey sample population and address specific research questions with an indication of which responses were most frequent and how these responses were distributed amongst respondent groups. Correlation analysis allowed an examination of the strength of relationship between two variables. For the non-parametric data collected in this survey, Spearman rho correlation coefficients were presented, showing a value between -1 and +1, with the size of the value indicating the strength of the relationship. The significance level (Sig. value) or p value indicates how much confidence was represented by the results obtained by showing the likelihood that the same effect will be found in the wider population that the sample was taken from. This is an indicator that a relationship of the same size exists in the wider population and an indicator if the relationship has arisen by chance or not. It is affected by the size of the correlation coefficient and the size of the sample. The larger the sample the more likely that the correlation coefficient will be found to be statistically significant. (Bryman, 2012; Pallant, 2013).

When no strong correlations of statistical significance could be found using the Spearman rho correlation, a crosstabulation analysis was performed in SPSS to further interrogate the data for patterns of association. Crosstabulations or contingency tables can be used to analyse relationships in pairs of variables. It allows two variables to the simultaneously analysed so that relationships between the two variables can be examined. The inclusion of percentages make these tables easier to interpret. The variable which is assumed to be independent populates the columns, and the presumed dependent variable populates the rows. Contingency tables are then generated so that patterns of association can be searched for. (Bryman, 2012). For the consumer survey data, crosstabulations were utilised to search for statistically significant patterns of association between demographic variables and attitudes and behaviours relating to garment purchasing, use, divestment and information sources. Meaningful results within each demographic variable which indicated areas of key importance to circular economy fashion strategies were also noted. Although not statistically significant these areas highlight avenues for further investigation or consideration by business planning. Results for these analyses are shown in Appendix E from page 417 to 622. The chi-square statistic was also applied to the contingency tables to find relationships of statistical significance between two variables or categories. Expected frequencies for each cell are calculated and observed values are compared with expected values to generate chi-square values (Bryman, 2012; Pallant, 2013). The chi-square test for independence explores the relationship between two categorical variables. A comparison of observed frequencies or proportions of cases that occur in each category is compared with what the expected values would be if there were no association between the two variables. To be significant the Sig. value needs to be 0.05 or smaller. If the significance level is not below 0.05 there is no association between the two variables. (Pallant, 2013). The null hypothesis is that there is no relationship between the two variables being examined. If a relationship exists, the null hypothesis will be rejected. If the null hypothesis is confirmed then the relationship should be rejected. (Bryman and Cramer, 2011).

Likert scale data was analysed using the ANOVA (analysis of variance) technique in SPSS, in which the mean scores of groups were compared to search for variance between groups and within groups. One way between groups analysis of variance uses one independent categorical variable with a number of different levels or categories, such as age groups, and one dependent variable, such as the Likert scale scores. Sig. values or p values are also used with ANOVA to reveal results of statistical significance. If the p value is less than or equal to 0.05, there is a significant difference between the groups analysed. To find out which groups differed, it was necessary to use post hoc analysis within SPSS. For the consumer survey data, ANOVA tests to search for patterns of association and relationships between

demographic variables and attitudes and behaviours relating to garment purchasing, use, divestment and information sources; plus personal style and ethics. Mean scores of each group within each demographic variable were compared to find significant differences. Results tables and post hoc analysis is presented in Appendix E from page 415 to 622.

3.12 Validity and Reliability in Mixed Methods Research

Reliability and validity are procedures to ensure the credibility of research (Creswell and Miller, 2000), and to establish that results from the research process are reported in terms of theoretically meaningful variables (Kirk and Miller, 2011). Validity refers to how well the research methods and results generated fit what is being measured, and reliability refers to how consistent and repeatable these measures are (Hammond and Wellington, 2012). For quantitative studies, validity is defined as a determinant of whether the research truly measures what it was intended to (Golafshani, 2003) or 'the extent to which a concept is accurately measured' (Heale and Twycross, 2015), and refers to 'the accuracy and truth of the data and findings that are produced' (Singh, 2007). Reliability in quantitative research refers to the consistency and accuracy of results over time; meaning that the research instrument, survey or test questions are able to reproduce repeatable results each time under a similar methodology (Golafshani, 2003). Validity in qualitative research refers to the quality, rigour and trustworthiness of the study in question (Golafshani, 2003). For qualitative inquiry, validity is viewed from the perspective of the personal responses and opinions of the researcher and / or the individual participants in a study (Creswell and Miller, 2000). Reliability is an evaluation of the quality of qualitative research to explain the complex situation under examination. The concept of reliability in qualitative research relates directly back to validity, in that research should be shown to be dependable and consistent in both process and findings. (Golafshani, 2003).

The focus in mixed methods research is on the link between approaches and how each can be used to improve the accuracy of inquiry into the same subject. In selecting samples for this mixed methods study, the use of contrasting methods and different sample sets allowed for the investigation to consider perspectives from the each of the multiple realities experienced or reported by the samples. This allows for a more rounded and complete picture of the realities being studied, and also allows for the corroboration of one set of findings with another, enhancing the validity of the findings through methodological triangulation. Creswell and Miller (2000) state that 'triangulation is a validity procedure where researchers search for convergence among multiple and different sources of information to form themes of categories in a study'.

Using triangulation, findings from one method can be corroborated, questioned or checked for bias against data from another method (Denscombe, 2010b). According to Denzin & Lincoln (2013) triangulation can be used as an alternative to the validation of data. In using a combination of multiple methods, gathering a variety of empirical perspectives and materials, a strategy to add rigour, breadth, complexity, richness, and depth to any research inquiry can be found (Denzin and Lincoln, 2013). In this study, careful consideration was given to the appropriateness of each method, effectiveness and consistency of each technique and accuracy of data collection. The researcher strived to remain objective and unbiased at each juncture. In order to maintain generalisability, sample sizes were chosen to as representative as possible within the means of the research. (Denscombe, 2010b).

4. Textile Collection Case Studies

4.1 Case Study Findings

In order to collect data relevant to the fulfilment of Aims 1 and 5, three case studies of UK based textile collectors were carried out. The results and analysis of these case studies also contributed directly to the fulfilment of Aims 3 and 4; by identifying areas of consumer inquiry relevant to the textile collecting industry and establishing how best to integrate the consumer survey findings into communication and business strategies to enhance the functioning of textile collecting. Three collectors were analysed in terms of their activities in order to assess what potential there exists between the business activities of textile collectors and fashion upcyclers. Questions were raised about how each business went about collecting, sorting, grading, processing and selling on textiles that had been donated or discarded by the general public. Inquiries were also made about the potential for upcycling at these organisations and what their previous experience of the practice and value of upcycling was, and which areas of inquiry relating to consumer behaviour would be most relevant to textile collecting. Each case exemplified a typical textile collecting firm and thus were appropriate to the research.

4.2 Thematic Analysis and Cross Case Synthesis

Presented in the following analysis is a comparative framework displaying the key observations and themes emerging from the textile collection case studies. Main categories and key themes consist of company information, collections, sorting and grading and value. Longitudinal case study research involving company archive data and extended observation was only carried out with one textile collector; I&G Cohen (IGC). This eliminated the possibility for comparative analysis of longitudinal data between additional textile collectors TRAID and LMB. However commonalities were identified between all three collection companies, indicating that IGC is representative of a typical textile collection company. Furthermore, IGC is also a key member of the Textile Recycling Association and Recyclatex, indicating their suitability in representing a typical example of commercial textile reprocessing activities in the UK.

4.2.1 Company Information

Table 9. Cross Case Analysis – Company Information			
	Company		
	IGC	**TRAID**	**LMB**
Date established	1959	1999	1985
Location	Salford, Greater Manchester, UK	Wembley, London, UK	Canning Town, London, UK
Association memberships	Textile Recycling Association & Recyclatex	Textile Recycling Association	Textile Recycling Association
Number of employees	40 (approx.)	20	NOT AVAILABLE

I&G Cohen (IGC)

Award-winning Salford based textile collectors I&G Cohen are a medium sized family run company in Salford. Established in 1959 by father and son Israel and Gerald Cohen, the business collects around 80 tonnes of textiles per week from a variety of locations throughout the UK, and is a key member of the Textile Recycling Association and Recyclatex, indicating their suitability in representing a typical example of commercial textile collecting activities in the UK. The business also has a wholesale vintage boutique, Ever So Bazaar, and were winners of the Queen's Award for Enterprise in the International Trade category, 2008. (www.igcohen.com, 2013). I&G Cohen agreed to take part in this study as a longitudinal case study, in which archive and observational data was collected on a number of research trips to the company between 2013 and 2015 regarding collections, processing, sales and related issues. A summary of the findings from the IGC case study, including interview data, field notes, observational records, photographic documentation and longitudinal company archive data is presented Appendix A, from page 289 to 329.

IGC Emerging Themes

Emerging themes from the IGC case study included the quality of collections, changing collection methods, seasonality, financial concerns, consumer and donator insights and product grades. Export customers' requirements have also become more specific and demanding, as well as seasonal, which has had a direct influence on sorting activities within the organisation. The focus of activities over the past two years has been on extracting as much value as possible from collections by diversifying and specialising sorting activities to

create very specific and high value products, such as seasonally sorted ‘crème’ grade clothing and seasonal grades of vintage. This newly emerging practice of sorting into increasingly specialised grades is of key importance to creating added value in this industry.

The overall quality of collected textiles has been falling in recent years, however it has been noted that for any type of collection, be it textile bank, door-to-door or alternative schemes, an association with a charitable organisation has led to increased quality of collected textiles. Regarding input for the consumer survey, questions on quality of donations were felt to be of importance. Queries were raised on whether consumers donated differing qualities of clothes and textiles in different locations, such as at a supermarket textile banks, civic amenity textile banks, charity shops or retailer take back schemes, and what the reasons were for this. Insights on how to best encourage consumers to donate better quality textiles and reasons why some textiles were disposed of in household waste were noted as useful possible outcomes from the survey. IGC had expressed a change in collection strategy, moving away from door-to-door collection and towards textile banks due to issues with security from unlicensed collectors, despite door-to-door collections peaking as their second largest collections stream.

Some seasonal patterns in collections have also been noted, with increases in school holidays. August was noted as being a particularly busy month. December is noted as a quiet month; however collections then start up again on Boxing Day. January is also quiet in terms of collections. In terms of sales, September, October and November are busy months for the African market. The Eastern European market shuts down in July and August that can cause imbalance between increased collections and decreased demand. Sale prices were rising but collection prices were also rising. Alongside falling quality and rising quantities, this has created financial imbalance. The company are constantly seeking to extract more value out of their current operations. One strategy to create more value has been to meet increased demand for more specialised sorted grades and less semi-sorted or unsorted grades.

Textile Recycling and Aid and for International Development (TRAID)

London based charity organisation TRAID was established in 1999 and raises money to fund projects to improve the conditions and working practices in the textile industry and to educate people of all ages on the impact of textiles on the environment and human society. The charity operates a network of 1500 charity clothes banks, home collections and eleven charity shops across the UK, where donated clothing is collected and transported to a central warehouse in Wembley to be sorted by hand according to condition, quality and style. The charity also has experience of transforming unwearable and damaged pieces of clothing into upcycled pieces to be sold under their award-winning in house fashion label, TRAIDremade. The charity was

shortlisted for Environmental Charity of 2009 by the Charity Awards (www.traidremade.com, 2012; www.traid.org.uk, 2015). A summary of the findings from the TRAID case study are presented in Appendix B (from page 335 to 346), including interview data and observational field notes of company activities and photographic documentation.

TRAID Emerging Themes

Emerging themes from the case study at TRAID include a changing collection strategy, plus the quality and quantity of collections and their seasonality, retailing second hand clothing in the charity's own shops and creating the upcycled TRAIDremade collection and the issues associated with selling this in their own charity shops.

Collections quantities and quality have both been falling at TRAID. It is assumed by TRAID that quantities are down due to increased competition with additional collectors, charities, cash for clothes shops and online resale. The charities answer to this has been to start collecting directly from donators by appointment, a service which they are calling 'bespoke'. It is hoped that although yields will be smaller, the increased quality associated with door-to-door collections will make this bespoke service pay off. Collections at TRAID have also been subject to seasonality. Highest collections have been in summer and around the months of April and September, when donators are likely to be changing the clothes in their wardrobes from one season to another. Months in which donations have been low have been February, November and December, although a late spring last March meant lower collection yields as donators held on to warm clothing for longer.

TRAID concentrate much of their activity making sales in their own charity retail shops. With eleven shops in the UK, 20% of all their collections are resold in this way, with around 80% resold to a wholesaler to be resorted again for overseas markets. With so much retail activity in the UK, the charity employs shop managers with a very clear idea of who their retail customers are and what products they will be looking for.

The charity also has experience creating an upcycled collection through their TRAIDremade label, although this uses less than 1% of their collected textiles. Although set up to run like a fashion label, the TRAIDremade collection also functions as a public engagement and educational tool, and demonstration of the charities commitment to sustainability and reuse. Barriers preventing TRAIDremade operating as a more viable commercial business appear to be a lack of promotional resources and short production runs leading to higher prices, as the label is not able to benefit from economies of scale. Selling the higher priced upcycled designer collection alongside much cheaper second hand clothing in two of TRAID's charity shops has also meant that target markets were missed. The brand may be taking steps to

mitigate this more recently, working collaboratively with different high profile designers each season and selling through a pop up shop in the fashionable Soho area of London.

Lawrence M Barry & Co (LMB)

Established in 1985 and based in Canning Town, London, LMB process around 170 to 200 tonnes of textiles per week collected from Local Authority centres and textile banks in the UK. Once sorted and graded textiles are baled and sold overseas, and also as wipers and rags for industrial purposes. The company also take part in local community activities, promoting environmental awareness and recycling, and work directly with designers who wish to use reclaimed textiles as source materials and were winners of the Queens Award for Export in 1997. (www.lmb.co.uk, 2015). A summary of the findings from the LMB case study are presented in Appendix C (from page 347 to 351), including observational notes on company activities.

LMB Emerging Themes

Emerging themes at LMB include local authority collections from recycling centres, a ‘double’ sort method or processing and the provision to dry damp textiles and grade any unsuitable for reuse into recycling grades.

The majority of LMB’s collections came from household waste recycling centres run by local authorities. It was felt that these were a more reliable source of collections than charity shops or textile banks as the quality was higher and three to four year contracts kept collection prices stable for longer periods. LMB also employed a double sorting method, in which textiles were sorted into chutes twice over. Presumably this increased the quality and accuracy of grades, creating a better product and therefore extracting more value. LMB also had provision to dry textiles on site, eliminating the problem of un-saleable wet garments and textiles. LMB also sorted textiles that were unsuitable for reuse grades into recycling or wiper grades, reducing waste overall.

4.2.2 Key Theme 1: Collection

Each of the case study textile collectors carried out collection of unwanted clothing and textiles. Main collection sources included textile banks, charity shops, door-to-door collections and local authority textile recycling banks. Collection quantities varied from 200 tonnes per month at TRAID to around 740 tonnes per month at LMB, with IGC in the middle at around 360 tonnes per month. The size of the sorting operation at each company reflected the different ‘goods in’ amounts, with much space allocated to the temporary storage of inventory, ready for distribution, at each company. Collection areas were wide ranging for each company, with IGC covering many locations in the North of the UK and the midlands, and both LMB and TRAID covering locations in London and the South East, indicating that for all textile collectors some overlap in collection areas must occur.

Table 10. Cross Case Analysis – Collection sub-themes			
	Company		
Sub-theme	**IGC**	**TRAID**	**LMB**
Main collection sources	200 textile banks, plus charity shops, door to door and cash for clothes shops	1,500 textile banks, bespoke door to door, commercial collections and charity shop donations	Local authority recycling centre banks and textile recycling banks from around the UK.
Average monthly collection	360 tonnes	200 tonnes	740 tonnes
Collection locations	80 to 90 locations around the UK, mainly in the North, some in the Midlands.	London and South East, as well as some textile banks in Bristol and Oxford.	London and Norfolk.
Quality	Reducing	Reducing	Varied
Quantity	Increasing	Reducing	NOT AVAILABLE
Charity	Better quality goods are received when collections are associated with a charity	TRAID is a registered charity	Charity shops collections stopped 15 years ago due to unreliable prices. Recently started again.
Seasonal patterns	Busiest in August and quiet in December	Highest collections in summer and around April and September. Donations low in February, November and December.	NOT AVAILABLE
Changing collection strategies	A move away from door to door towards and towards textile banks to eliminate problems with unlicensed collectors	‘Bespoke' collections directly from donators homes, by appointment	Main collections are from recycling centres. Recently started to receive supply from charity shops once again.

Textile Banks

IGC collect from around 200 textile banks, located in 60 to 70 locations around the UK, mostly in the North of England. Textile banks are often run in association with a charity such as The British Heart Foundation and form up to 60% of IGC's collections. Charity associations have a positive effect on the quality of collections. Whether for textile banks or otherwise, the quality of goods donated is higher when there is an association with a charity organisation. Textile bank collections have remained steady and increased in volume between 2013 and 2015, with collection prices falling, creating a more attractive supply stream. Unsorted collections from textile banks have been a popular sale product grade for IGC. Sales of 170kg bulk bags in this category go to buyers in North Africa, Eastern Europe and the UK, where they are then sorted. Towards the end of the three year study it could be seen that sale prices had fallen by 37.5% and that sales volumes and revenue from this category had also reduced over time. This may have been because demand for unsorted grades had fallen as demand for increasingly more specific grades had increased. TRAID operate a network of 1,500 textile banks around London and the South East, which stretches to Bristol, Oxford and Brighton. This network of banks represents at least 50% of all collections coming into TRAID, although the charity reports yields to have been declining more recently. The textile bank collections coming into LMB are from larger 1,800 to 2,000kg textile recycling banks from local authority household waste recycling centres. LMB view these type of collections are more reliable due to the three to four year contracts secured to process these collections, although quality is regarded as variable depending on the location of the recycling centre, which could be at a waste site (or 'tip') or supermarket car park. This suggests that individuals take poorer quality clothes and textiles to the waste sites to be disposed of or recycled, and better quality items to supermarket sites to be donated and reused.

Charity Shops

IGC purchase unsold stock by weight from charity shops. This raises extra funds for the charities and forms around 10 to 15% of the goods coming in to IGC. The quality of these charity shop goods has been falling over time. This may be due to the overall fall in the quality of clothing purchased as 'fast fashion', but may also be accounted for through better quality clothes being kept for longer by owners or sold by individuals through online peer to peer sites or at cash for clothes shops in times of economic uncertainty. Although quality is falling, the overall quantity of charity shop goods arriving into IGC has been increasing over time and collection prices have been falling, possibly due to the increase in the number of charity shop on UK high streets in recent times. Charity shop goods also represent one of the grades of unsorted original products sold by IGC in 170kg bulk bags. Sales appear to have ceased for

this category, perhaps with charity shop goods making up quantities in other product grades. TRAID receive donations of clothes and textile into each of their 11 charity shops in London. LMB stopped collecting from charity shops around 15 years ago as prices were unreliable and too high. LMB had recently decided to start collecting from charity shops again at the time of this research.

Door-to-Door Collections

Door-to-door collections have been problematic throughout the entire textile collecting industry. This source provides some of the highest quality collections but problems with unlicensed collectors, theft and disputes within the industry have led to a marked decline in supply. For IGC, door-to-door collections made up to 15% of goods in at the peak of supply, however goods in were now minimal from this source by the end of 2015. Viewed as the most preferential way of collecting high yields of better quality textile, IGC had been collecting local authority door-to-door collections since 1997, and worked with WRAP to create a textile collection guidance document in 2012 to attempt to solve some of the problems facing the industry. These issues were not resolved satisfactorily for IGC, and supply declined significantly from a peak in 2013. Door-to-door collections also represented one of the grades of unsorted original products sold by IGC in 170kg bulk bags, although sales of this grade had ceased by 2014, reflecting the issues in supply. TRAID were keen to take advantage of the better quality textile collections that result from door-to-door collections, and had created an appointment based collection service to ensure greater security and boost their declining textile bank yields. The 'Bespoke' scheme had only just been introduced by the charity at the time of the research, so no feedback on the success and yields collected was yet available. Door-to-door collections were not mentioned during the visit to LMB, although the company websites mentions collecting from schools

Cash for Clothes Shops

In Cash for Clothes shops payment is offered to members of the public for their textiles, who receive payment per kg of clothing delivered to a drop off point or shop. Some Cash for Clothes schemes will also collect directly from households by arrangement. (Claes, Gardner, et al., 2012c). IGC consider supply from these organisations to be poor in quality and although the company received a significant proportion of their goods in from these sources in 2013, IGC ceased to purchase these collections from the end of 2014. This may have been because of rising prices or more limited supply as the exchange value to the public has fallen. TRAID viewed Cash for Clothes organisations as direct competition for the supply of used clothing. This indicates that TRAID would not source from an external supplier and rely solely on the collection of direct donations of clothes and textiles to the charity. In direct contradiction to

IGC's view of poor quality from Cash for Clothes shops, LMB considered these collections to be of best quality. This may indicate that Cash for Clothes collections are of better quality in the regions LMB is sourcing from, such as London and the South East, or that Cash for Clothes collections are of better quality compared to the local authority recycling centre collections that make up the greatest proportion of LMB's supply.

Collection Issues

Key concerns relating to textile collection were highlighted in each of the three case studies. These included the quality, quantity and cost of collections, collecting on behalf of a charity and the seasonal patterns relating to collection yields. Collection strategies and how they were changing and developing over time was also a key point discussed.

Quality

Both IGC and TRAID view the quality of clothing collections as falling in recent years, relating this to lower quality clothes purchased initially; clothes kept and used by individuals for longer, resulting in more worn out items received in collections; and better quality items kept for individual peer to peer online resale. For IGC, however it has been noted that for any type of collection, be it textile bank, door-to-door or alternative schemes, an association with a charitable organisation has led to increased quality of collected textiles. TRAID's scheme to collect directly from individuals by appointment appears to target the best quality collections possible and offer the most convenience to the donators. If such a scheme could present an even more convenient service to individuals that personal resale or other forms of peer to peer divestment there is the possibility that the service could start to collect the better quality items which had previously been sold online, stored in homes or passed on to friends and family. LMB's view that collection qualities vary depending on the donation site suggests that locating textile collection facilities in waste sites may result in poorer quality collections. Locating facilities closer to retail outlets may alter the way individuals think about the divestment of clothing and result in better quality collections.

Quantity

IGC view the quantity of used clothing as increasing, although an examination of the collection data shows that overall quantities are gradually decreasing. This may be because IGC have ceased supply from two of their main sources, door to door and cash for clothes. Quantities from textile banks and charity shops confirm the view that quantities are increasing over time. This is in contrast to the view from TRAID that collection quantities are decreasing; however, these differences may be explained by regional differences, as IGC are located in the North

and TRAID in the South. LMB made no comment on their collection quantities but did outline plans to double the capacity of their current storage, indicating that there must be an ample supply of goods in to warrant this.

Charities

IGC's supply of goods in are often associated with a charity such as the British Heart Foundation or Christie Hospital. IGC pay for the branding and licensing of the charity logos when collecting on their behalf from textile banks or other forms of supply. It has been noted by the company that this often results in better quality items than those collected alongside household recycling. The supply of charity shops goods has also increased in quantity and fallen in price over the three years studied. This added competitiveness and reliability may have contributed to LMB's decision to start receiving supply from charity shops again after a 15 year hiatus.

Seasonal Patterns

IGC note that their busiest months coincide with school holidays and immediately before the start of the academic year. August is busy month and December and January quiet. This is confirmed by their textile bank and charity shop collection data that also shows increased activity around August and the summer months, with dips in supply around December. TRAID also confirm these seasonal patterns, reporting high yielding banks in summer and at times of seasonal change, when wardrobe items are updated, such as in April and September. Quietest months are around December, November and February. A late spring in 2014 also resulted in lower yields in March of that year. Information on seasonal collection patterns was not available from LMB; however, at the time of the research in November 2014, the sorting operation appeared to be operating at full capacity.

Collection Strategies

IGC have concentrated their collection activity on textile banks, with a significant proportion still coming in from charity shop collections. Collections from door to door and cash for clothes shops have stopped due to regulatory problems in the industry and less competitive prices. TRAID are responding to lower yields and lower quality from their textile bank collections by offering their 'Bespoke' appointment based door-to-door collection service. The charity reports higher reuse rates from door-to-door collections that it is hoped this scheme will take full advantage. LMB have recently started taking charity shop collections and alongside their main strategy of local authority recycling centre collections.

4.2.3 Key Theme 2: Sorting and Grading

In this section the sorting and grading activities for each of the case study companies is analysed comparatively. At IGC sorting activities are directly influenced by the current demand and market price for each type of product the company can make. The company do not currently sort into fibre type, but would not rule this out if the demand were to emerge in the market. For TRAID seven to eight tonnes of textiles are sorted per day on the conveyor belt into categories for wholesale export and for each of the eleven charity shops operated by TRAID. LMB employed a double sorting method, in which textiles were sorted into chutes twice over to increase the quality and accuracy of grades, creating a better product and extracting more value.

Table 11. Cross Case Analysis – Sorting and Grading sub-themes

	IGC	**TRAID**	**LMB**
Sorting process	Trolley cages, bulk bags / conveyor belt, trolley cages, chutes /cupboards, bags / bales	Trolley cages, conveyor belt, trolley cages, bulk bags / shops. Rolls of fabric go directly to TRAIDremade.	Large conveyor belt, 2 smaller conveyor belts, trolley cages, chutes / wheelie bins, bales / bags
Number of grades sorted to	22	11 shop categories plus approx. 7+ wholesale categories.	44
Waste	Wet bales, soiled and damaged clothes and textiles.	Duvets, pillows, unpaired shoes, wet, soiled and damaged clothes and textiles, and broken toys.	Duvets and pillows.
Recycling	Cardboard, plastic bags	Fabric rolls upcycled into to the TRAIDremade collection	Bric-a-brac, WEEE, recycling grade textiles
Changing sorting methods	Increased sorting grades to extract more value from collections	Shop managers also sort from the belt to pick specifically for their own shops.	Double sorting method to increase sorting accuracy and extract more value.

Process Models

During the case studies, processing activity data was collected through first hand observation and documented visually in process models, field notes and photographic evidence; literally *'walking the flow'* as recommended by Manos (2006). Key members of staff were consulted to refine observational data collected on the flow of processing activity and confirm the accuracy of observations. This enabled the identification of processes by which waste textile value streams were elevated to maximise environmental, social and economic benefits. Extended observation was carried out at IGC, enabling much more comprehensive data to be collected at this site. Process models were created for the IGC, TRAID and LMB processing routes, showing: sorting and grading, transportation, products created, numbers of workers for each stage, the direction of flow of activity and when storage occurred. Business process modelling is used to describe how organisations such as businesses perform their work. These models can be used to train new employees, re-engineer processes, develop simulations to test the processes and to develop systems to automate the processes (Dufresne and Martin, 2003). As a company's success can be determined by the accumulation of activities which take place in each business process, analysing these processes gave key insights into how an organisation accomplishes its objectives (Jacka and Keller, 2009).

Flow charts were used as the main way of graphically illustrating and analysing processes in the models. Dufresne & Martin (2003) cite flow charts as one of the most simple methods to model processes in an organisation, with 'functional flow block diagrams' a development of this, used to show the order of execution of system functions, which can take either concurrent or alternative paths. Described by Giaglis (2001) as 'a simple, graphic means of communication, intended to support narrative descriptions of processes when the latter become complicated and difficult to follow', flow charts have the advantages of showing the overall structure of a system, the flow of information and work, and the location of key processing points (Giaglis, 2001), alongside ease of use and clarity. Hines & Rich (1997) also cite flow charts as part of suite of tools used in process activity mapping, recommending that after a preliminary analysis of the processes have been undertaken, followed by the detailed recording of all the items required in each process, a simple flow chart of the types of activity being undertaken at any one time can then be made. A key to symbols used in the process models is shown in Figure 18.

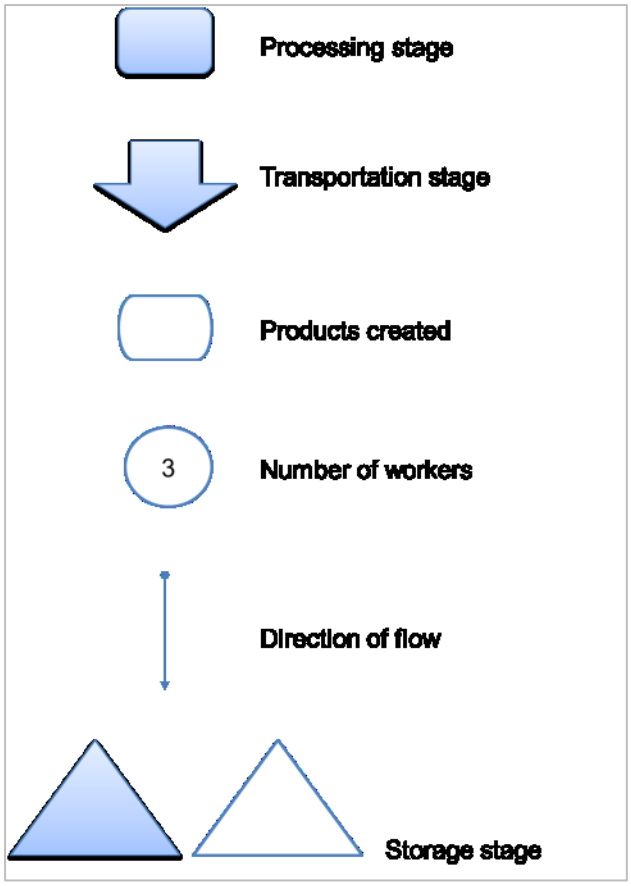


Figure 18. Process model key

IGC Process Models

At the time of this research, two distinct sorting routes existed within IGC, and one sub-route for vintage.

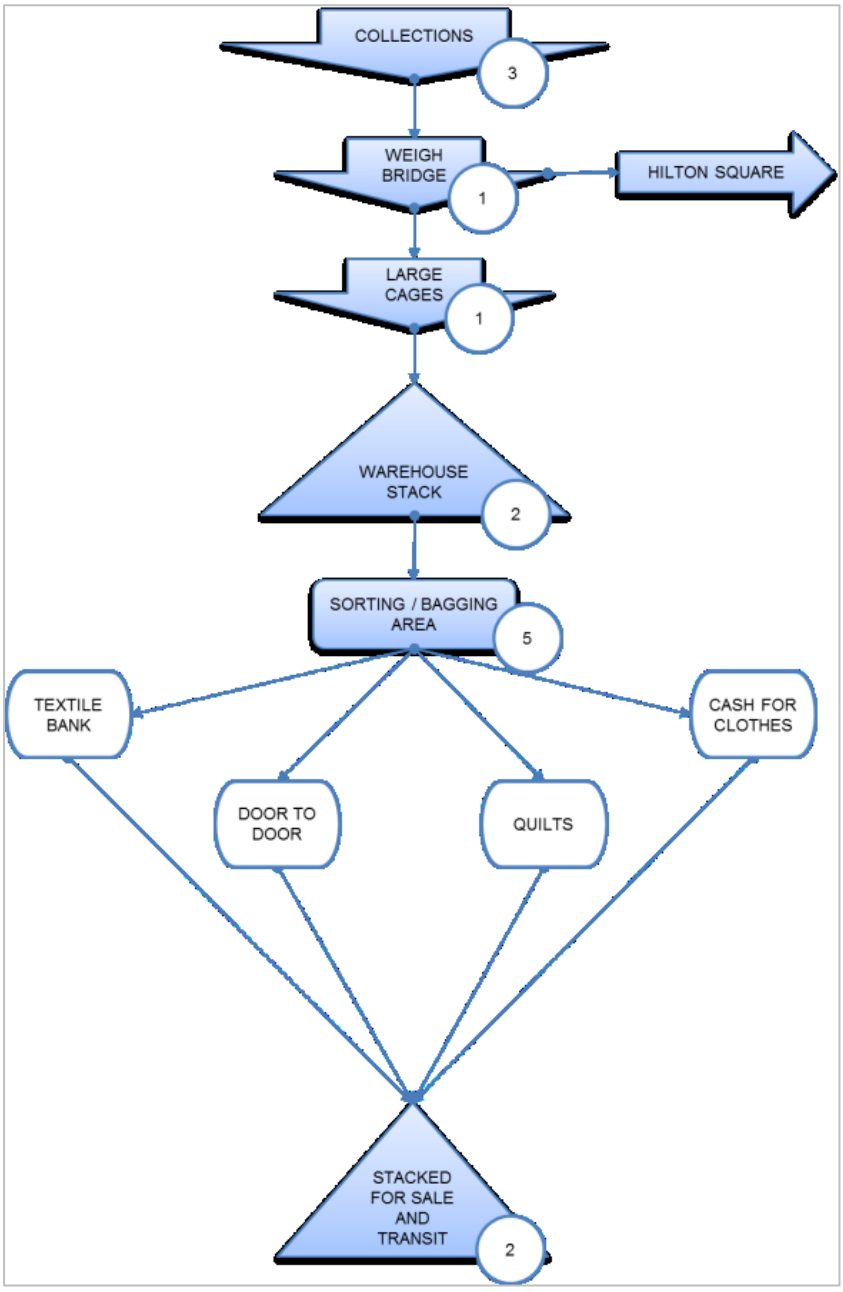


Figure 19. IGC, Bazaar Street process model (24th May 2013)

In the first route, collections arrived at the Bazaar Street site and were minimally sorted, by removing any plastic bags, rubbish or non-textile items, and then packed into bulk bags, labelled to indicate the collection origins of those textiles. End markets typically were Eastern Europe and the UK.

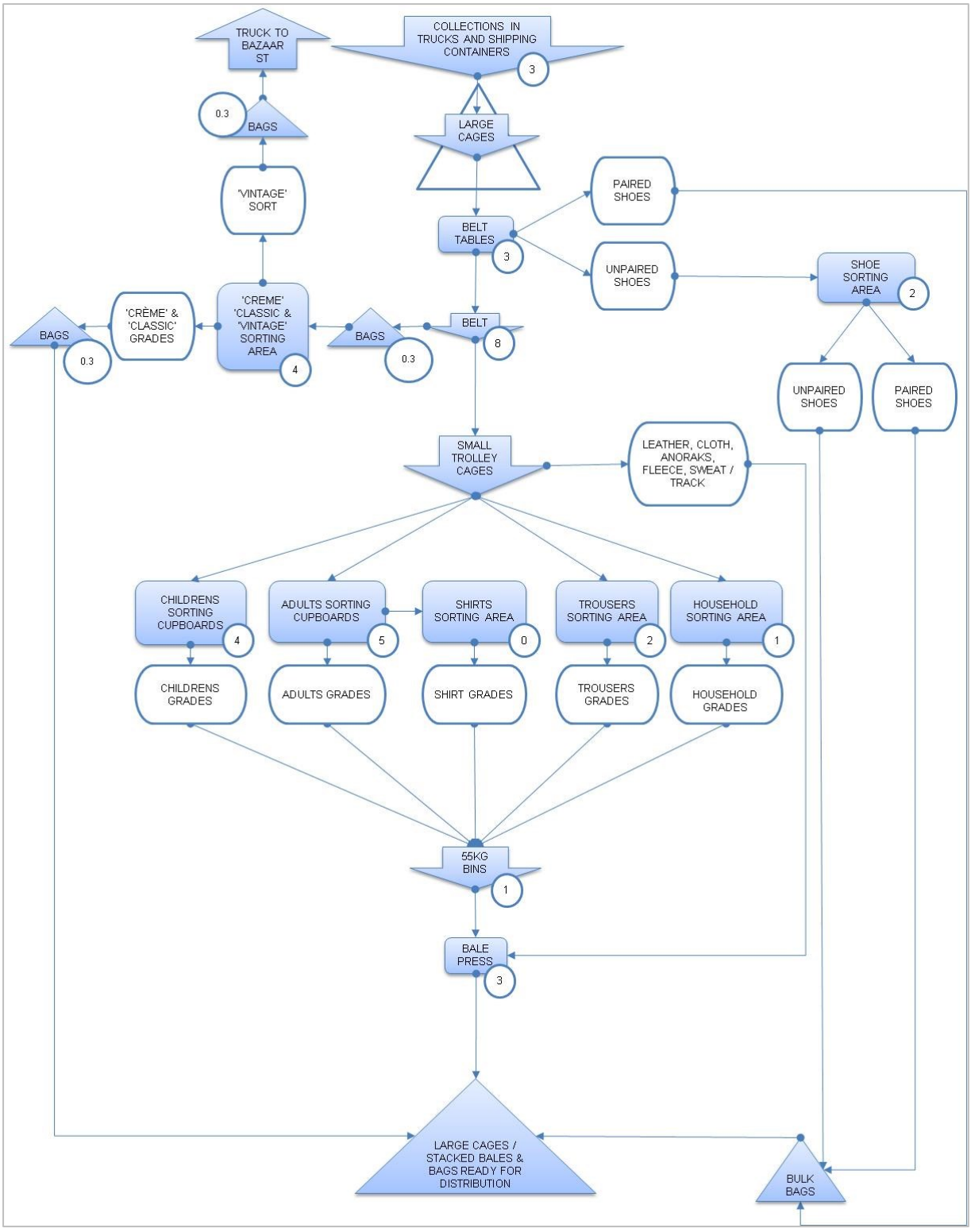


Figure 20. IGC, Hilton Square process model (14th May 2013)

In the second route, collections for further sorting were sent to the Hilton Square site and loaded onto the conveyor belt with rubbish and non-textile items removed, and shoes were sorted out from the textiles. Items were picked off the belt and sorted and graded into multiple

categories, first in trolley cages then into categorised chutes / cupboards, before being baled into many distinct product categories for African, Eastern European and Asian markets.

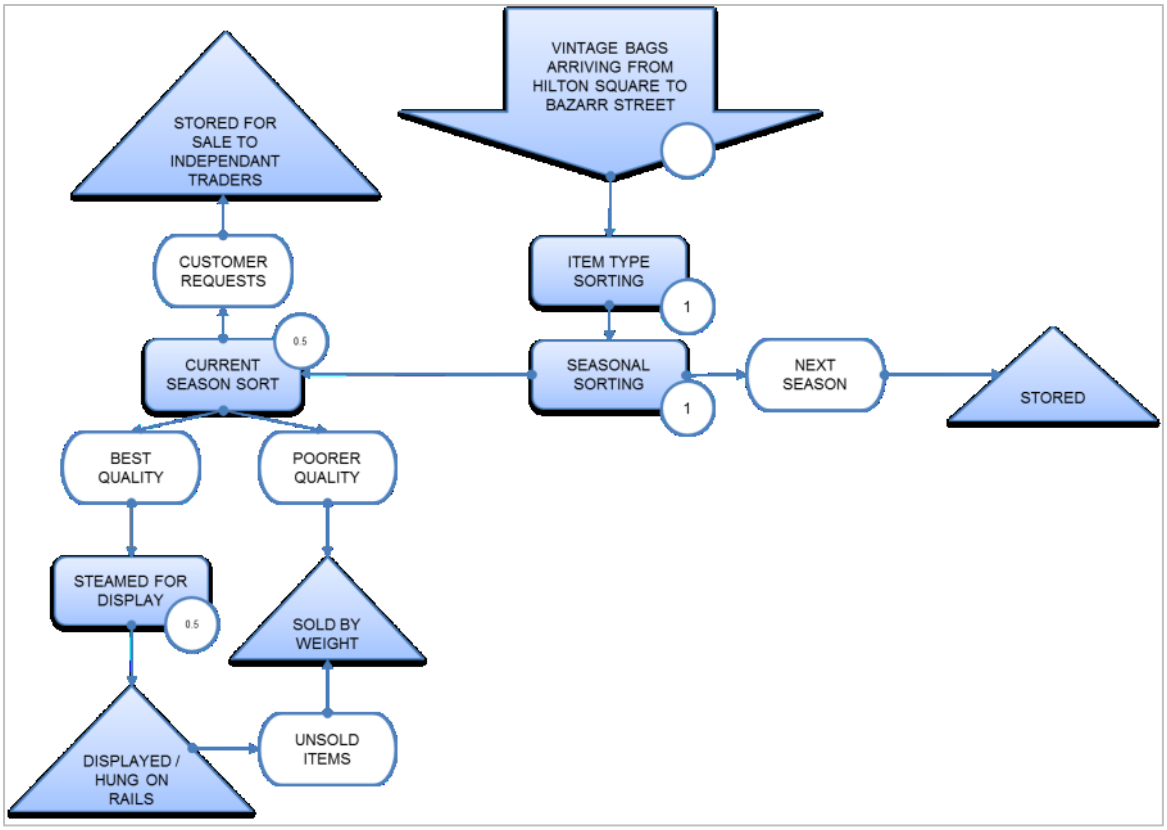


Figure 21. IGC, Bazaar Street Vintage process model (24th May 2013)

In an additional sub-route, bags of vintage items from Hilton Square were brought over after being sorted into the general categories. Deliveries are brought over by vehicle in bags, then emptied out and sorted into the individual item types and by season before being sold in the wholesale boutique as individual items or by weight for the poorer quality items.

TRAID Process Model

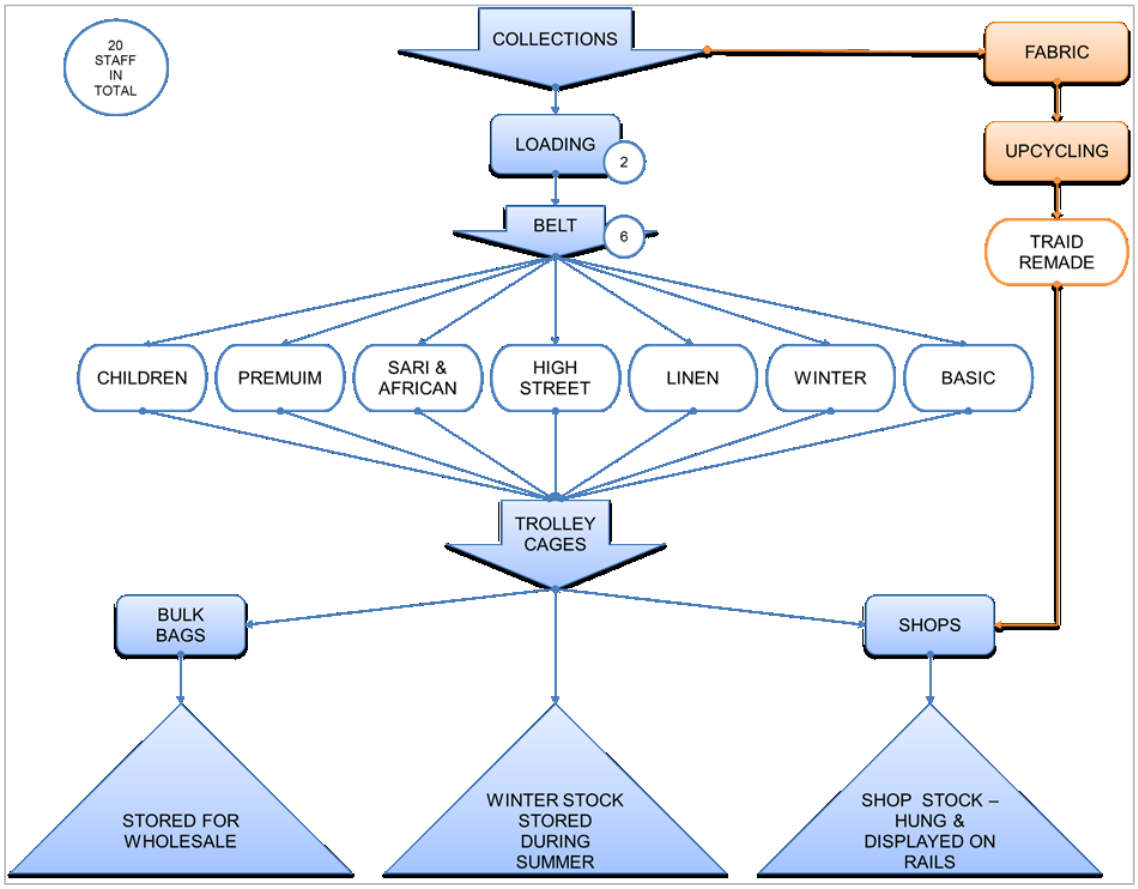


Figure 22. TRAID, Wembley process model (21st July 2014)

At TRAID collections are fed on to a conveyor belt, with rubbish and non-textile items removed. Sorters then categorise items from the belt for each of the 11 charity shops and for wholesale export. Items are packed into bulk bags for export or piled into trolley cages to be transported to one of the charity shops.

LMB Process Model

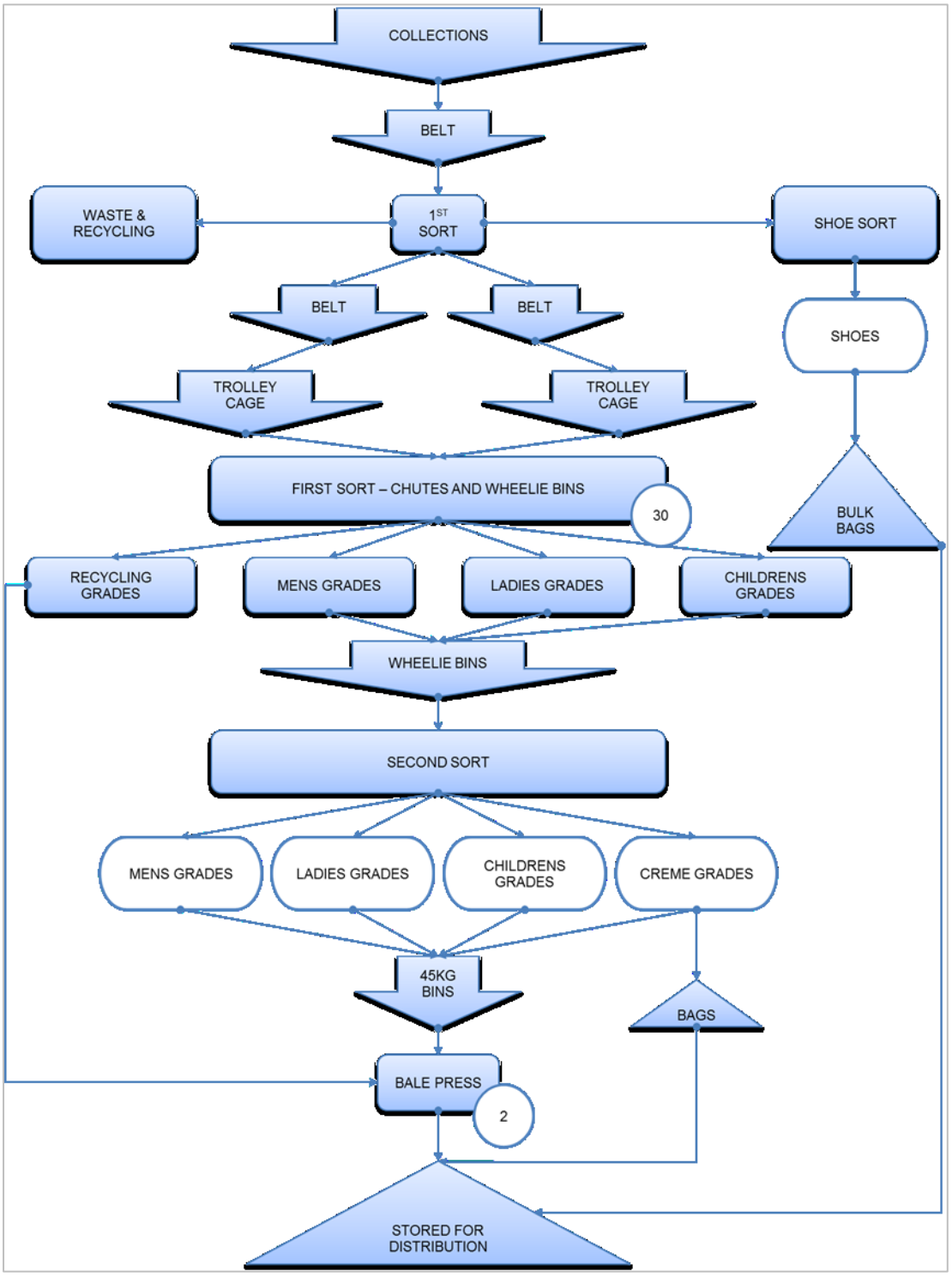


Figure 23. LMB, Canning Town process model (19th November 2014)

At LMB, collections in large recycling centre banks arrive at the site and are emptied onto a large conveyor belt, which carries items up into the sorting facility. Rubbish, non-textile items, pillows and duvets are removed, and shoes are sorted out from the textiles, before items enter onto two smaller conveyor belts that feed two trolley cages. Cages are then brought to the

chutes, where sorters grade items in to the reuse or recycling categories in front of them. Items to be graded located elsewhere are placed in wheelie bins and taken to the appropriate sorting location when full. Items are then baled or bagged for sale and distribution or storage.

Sorting Process

At each of the case study locations, the sorting process operated as a production line, in which collections of clothing and textile items arrived in bulk quantities, often in small plastic bag lots which needed to be opened up. Items would then be fed on to a conveyor belt which would transport the items for sorting as at LMB, or function as the initial sorting by hand stage as at IGC and TRAID. LMB did not sort directly from the belt, but used a double sort method with their chutes to ensure accuracy. Main points of difference also occurred in the size of each operation. TRAID had the smallest sorting operation with around 20 sorters, while LMB and IGC had between 30 and 40 sorters each. The number of grades sorted to was also reflected in the size of each operation. TRAID sorted into around seven wholesale grades, with a separate sort for each of the 11 shops, whereas IGC sorted into at least 22 grades and LMB into at least 44. Waste presented a problem at each of the case studies, particularly wet, soiled and damaged textiles. These were either stored or disposed of as at IGC or simply disposed of at TRAID. LMB had facilities to dry wet items. Duvets and pillows presented a problem for both TRAID and LMB, with not available markets for these items. IGC were able to export some bedding items such as duvets and quilts, although these items are of minimal value and demand is low. IGC expect to change their sorting methods to create a greater variety of more specialised grades, in order to extract more value from their collections. LMB used a double sort method to increase accuracy in sorting; suggesting that this also prevents loss of value. TRAID's shop managers were directly involved in sorting and picking items for the shops they managed, utilising their knowledge of these local markets to ensure targeted selections of products were supplied.

4.2.4 Key Theme 3: Value

Table 12. Cross Case Analysis – Value sub themes

	IGC	TRAID	LMB
Collection Costs	Increasing from £100 to £130 per tonne in 2004 to an average of £430 per tonne from 2013 to 2015	NOT AVAILABLE	Uncertain from charity shops. More stable from local authorities.
Quantities baled	55kg bales, premium grade bags, 170kg bulk bags, 20 tonne containers	Trolley cages for shops and bulk bags for wholesale.	45kg bales, premium grade bags, containers
Main sales locations	Africa, Eastern Europe, Pakistan	11 shops in London and a wholesale export re-sorter.	Africa and Eastern Europe
Average monthly sales	335 tonnes @ £780 per tonne	NOT AVAILABLE	100 tonnes
Sales observations	Customer requirements have become more specific and seasonal, which has led to diversified sorting	20% of collections are resold in their own charity shops. 80% is sold directly to a wholesaler who resorts for export.	Merchants buy whole containers on 50% credit for the African market.
Seasonal patterns	Busiest in September, October and November. Quiet in July and August. Out of season vintage items are stored until they are needed.	Out of season items for shops are stored until they are needed.	NOT AVAILABLE
Retail locations	1 vintage wholesale boutique at the Salford site	11 charity shops in London	LMB Supplies, London (wholesale wiper supplies)

Collection Costs

Collection costs for IGC fell over the three years studied, although by December 2014 costs had started to level out, once door to door collections were negligible and cash for clothes goods in had stopped. Door to door and cash for clothes were the two of the most expensive

sources of the top four goods in categories. Cost data was not available for TRAID or LMB, although TRAID's introduction of appointment based collections is likely to add on more for the charity.

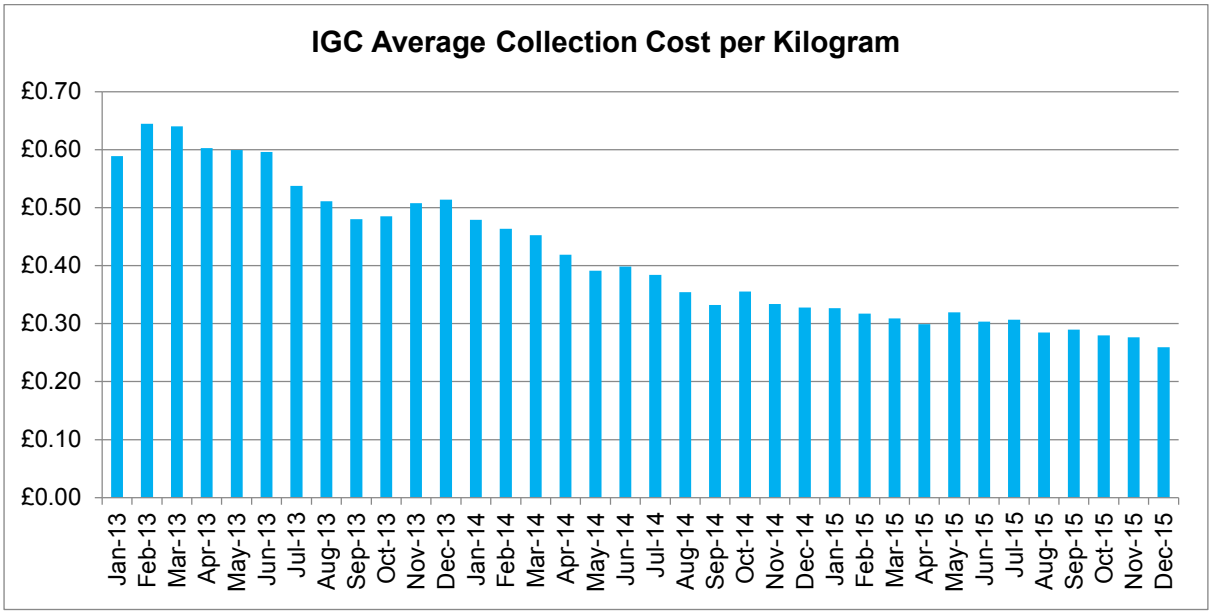


Figure 24. Average Collection Cost per Kilogram

Each of the case study companies created bulk packages of clothes and textile for sale and export. At IGC 55kg bales of each sorted grade were created and sold in multiples of six bales, often filling 20 tonne shipping containers. 170kg bulk bags of unsorted products were also sold for resorting. At TRAID trolley cage loads were created to supply each of the 11 shops and bulk bags were filled for wholesale export. At LMB 45kg bales were created and sold in multiples of six bales, to fill two to three shipping containers per week. Both IGC and LMB export to Eastern Europe and Africa for the bulk of their sales. IGC also send significant export quantities to Pakistan. TRAID sell around 80% of their clothes and textiles to a wholesale exporter, although it was not made clear where the final destination of these products would be. 20% of TRAID's supply goes to their own charity shops, of which there are 11 in the London area. IGC have their own wholesale vintage boutique at their Salford premises, where shop owners, retailers and merchants can buy a supply of vintage for their own enterprises. LMB have their own recycled wiper supply business, supplying wholesale cleaning cloths to industrial clients.

Sale Prices

IGC sold an average of 335 tonnes per month for approximately £0.78 per kg. As can be seen from the chart, sale prices fell overall over the three year study, but remained sufficiently higher than goods in costs to still offer a profitable business opportunity. Sale prices data was not

available for TRAID or LMB, although LMB estimated their output to be around 100,000 tonnes per month. This is much lower than LMB's goods in, suggesting a high quantity of stored inventory and confirming their need for increased storage space. LMB also offered their clients 50% credit on containers, although it was not made clear what the rate of interest would be on the balance of payment.

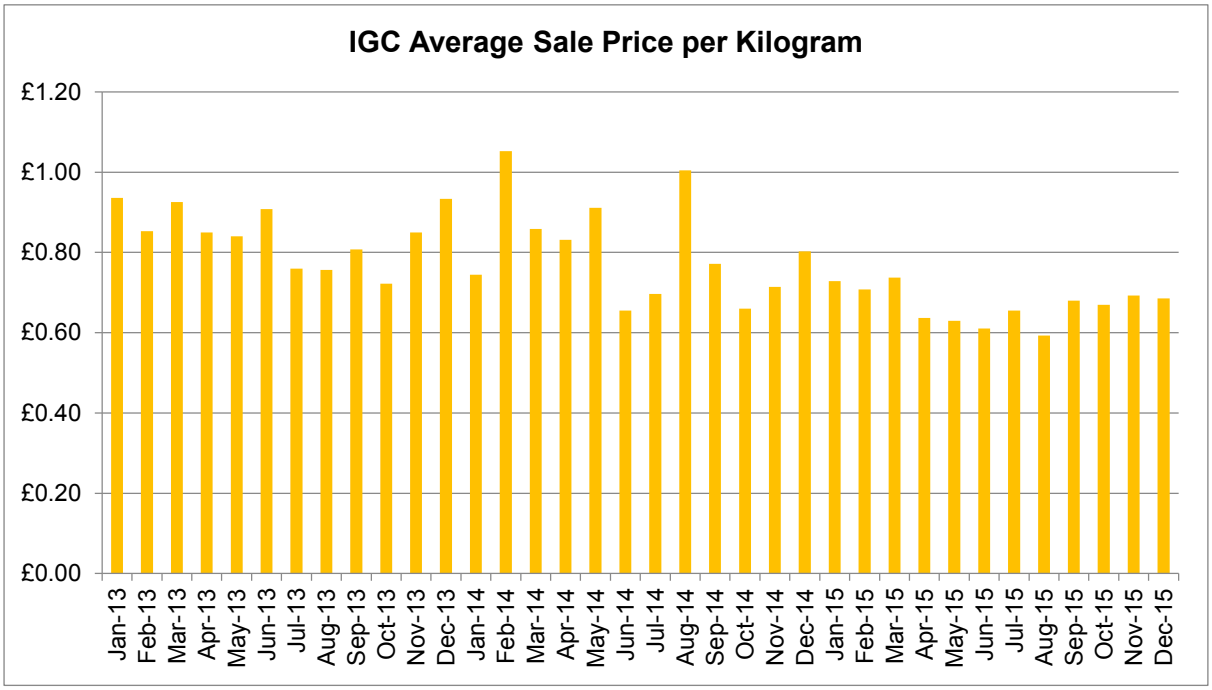


Figure 25. Average Sale Price per Kilogram

IGC Overheads and Running Costs

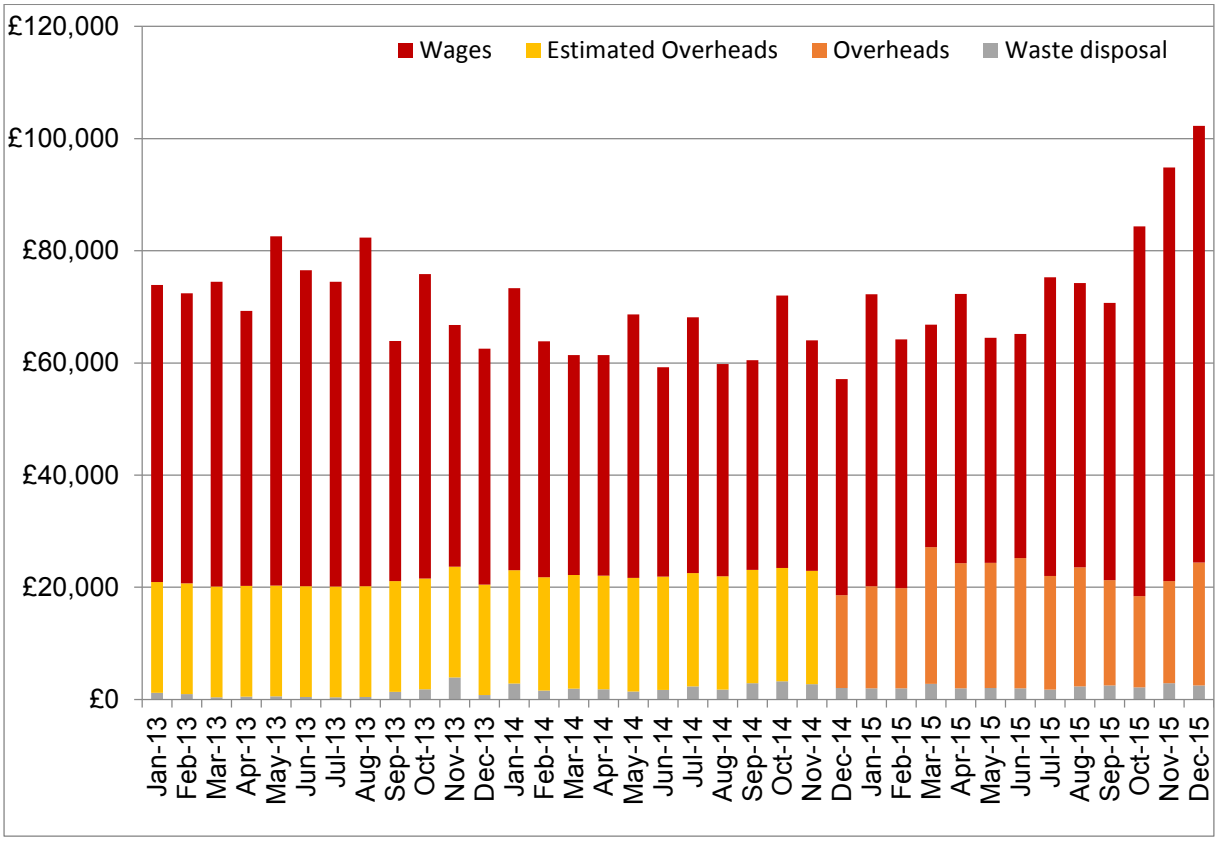


Figure 26. Overheads and Running Costs

As well as wages and waste disposal, running costs for IGC also included overheads of rent, rates, insurance, utilities and motor expenses, as shown in Figure 26. Overheads data for 2013 and much of 2014 was unavailable at the time of this study, so an average has been applied to these months to create a more realistic picture of direct costs. Average overheads for 2015 came to £20,414 per month. If this average were to be applied to 2014 and 2013, allowing for inflation between years (Bank of England, 2014), it is estimated that average monthly overheads came to £20,214 per month in 2014 and £19,748 per month in 2013. Using this estimate, average total running costs are around £71,000 per month for IGC. Monthly goods in costs are approximately £155,000 and average monthly sales are around £260,000, leaving around £34,000 per month (just over £400,000 per year) for management wages, profit and investment back into the company.

As can be seen from the total sales (Figure 27) and total goods in (Figure 28), both sales and goods in costs fell over the three year period studied, with frequent fluctuations between profit and loss in 2013, shown in Figure 29. Both sales and goods in costs start to level out by December 2014, when both door to door and cash for clothes supply had become negligible or ceased, enabling the IGC to receive the required volume of goods in at a lower and more reliable cost.

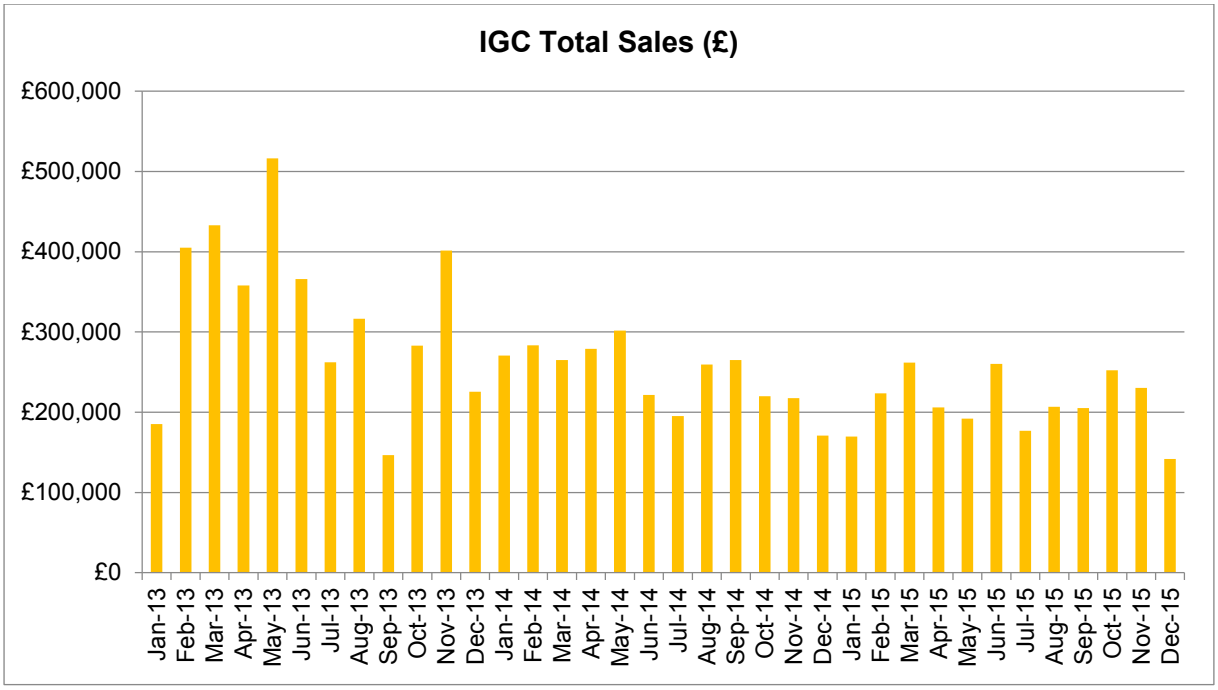


Figure 27. Total Sales

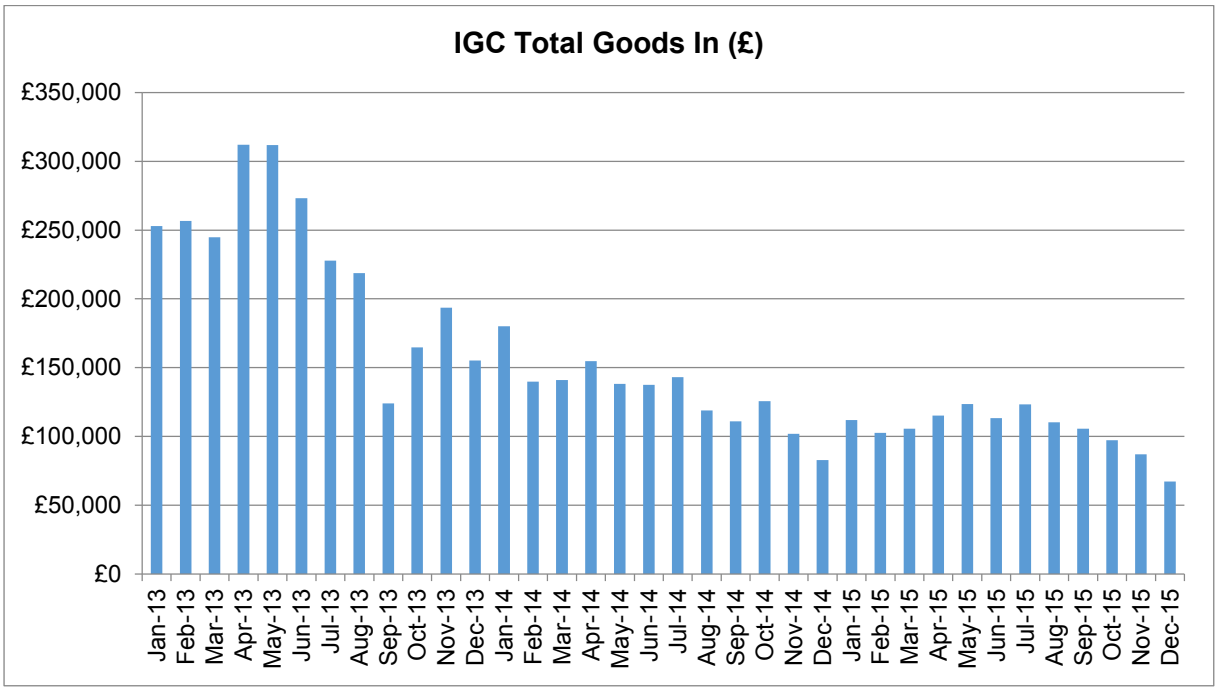


Figure 28. Total Goods In

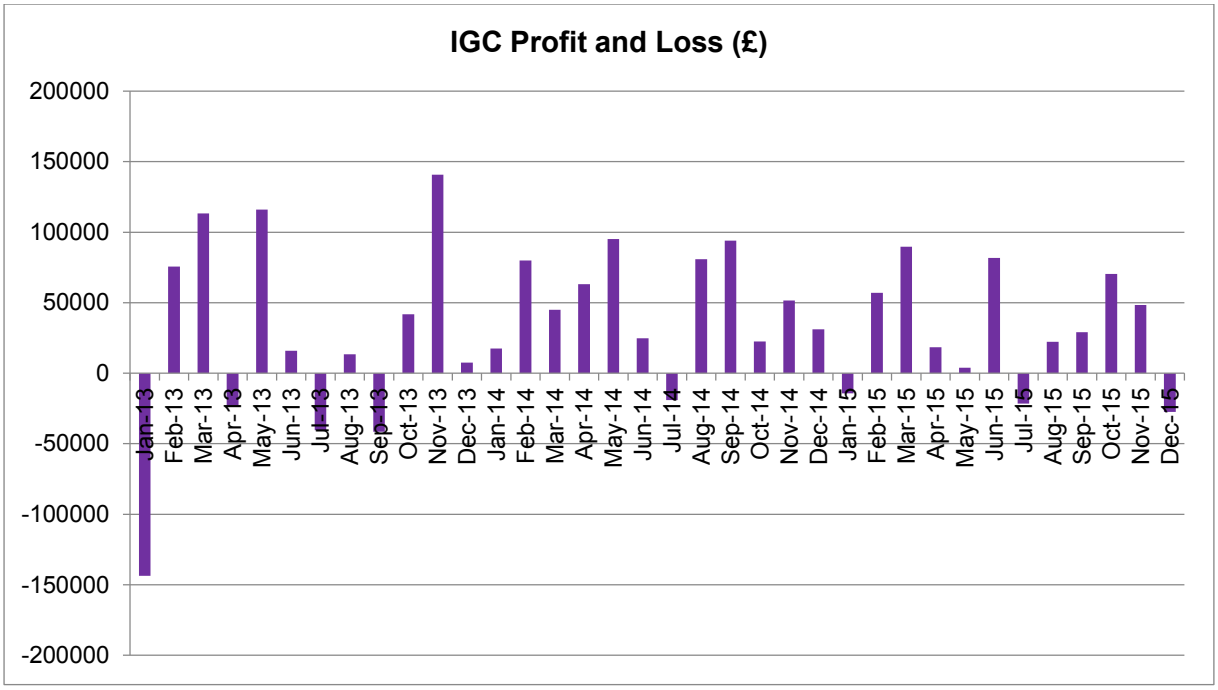


Figure 29. Profit and Loss

Seasonal Patterns

IGC found sales to be busiest in September, October and November for the African market, with sales in Eastern Europe consistent throughout autumn, winter and spring. The Eastern European market shuts down during summer months, resulting in a build up of supply and stored inventory. Both IGC and TRAID store out of season items for their own retail outlets until they are needed. For IGC this represents vintage items and for TRAID this is any out of season stock suitable for sale in one of their shops.

4.2.5 Consumers

Each of the case study companies were consulted regarding the consumer survey. Respondents were asked what it would be useful to know about consumers and their garment purchasing, use and divestment behaviours.

IGC brought up five main areas of inquiry:

1. What would encourage individuals to donate more re-useable clothing?

2. Why do individuals put clothes and textiles in the bin?

3. How much do individuals understand about what happens to their discarded clothes and textiles?

4. What sort of information would individuals find useful to receive about textile recycling and reuse?

5. Do individuals donate different qualities of textile to different collection and divestment schemes such as supermarket textile banks, household waste recycling sites, charity shops, retail environments or peer-to-peer resale?

TRAID raised the issues of price, quality and design as important criteria for consumers, as well as not being made to feel guilty for consumption choices, but instead having easy and convenient ways of making responsible choices presented to them.

LMB did not comment on their views or queries about consumers, but did indicate varying qualities of collected textile from different sites, suggesting that retail environments may yield better quality collections, as per IGC's fifth point made regarding consumers.

These areas of inquiry were incorporated into the development of the consumer survey questionnaire as a data gathering instrument, in order to identify more effective ways to change and improve public perception and consumer behaviour regarding clothing and textile usage.

4.3 Discussion

The textile collectors analysed in the three case studies currently function as post-consumer textile collectors who collect, sort, grade and resell unwanted textiles. The clothes and textile which are their raw materials are collected from consumers who no longer want or need these items, through a variety of sources both directly by the case study companies and indirectly by external organisation on their behalf. The case study companies also collect on behalf of organisations such as local authorities and charities, creating a complex network of collection contracts, routes and jurisdictions. In order to create value from these unwanted and devalued items, sorting and grading activities categorise textiles by type and quality for the most appropriate market. In categorising these items and packaging them for resale, human labour adds exchange value back into these textiles by making them into saleable commodities once again (Brooks, 2012). The value from the resale of these textile products is both economic, in terms of commercial profit and charity fundraising, plus social, in terms of employment, fair labour and international development in the case of TRAID, and environmental.

The environmental benefits from reuse and resale include savings on the carbon equivalent emissions associated with both the diversion of waste from landfill and replacement for the manufacture and purchase of new items. McGill et al. (2010) calculated that the final net carbon footprint of textile reuse is -4,327 kgCO2-eq/tonne, representing a carbon equivalent saving of over 4 tonnes per tonne of reused textiles. Indeed, Woolridge et al. (2006) found that the total energy extraction associated with collection, sorting, baling, selling and distribution of used garments is only 2.6% for cotton and 1.8% for polyester of the energy required to manufacture them from virgin materials. Farrant et al. (2010) also found that the collecting, processing and transport of second hand clothing to have insignificant impacts on the environment in comparison to the savings achieved by replacing newly made garments. Lifecycle analysis by Farrant et al. (2010) revealed that the reuse of 100 second-hand garments would save between 60 and 85 new garments dependent of the place of reuse, and that the reduction of impacts resulting from collecting and reusing 100 garments range from a 14% decrease in green house gas emissions for a cotton T-shirt to 45% reduction of human toxicity for polyester/cotton blend trousers. Further savings can be made by diverting more textiles from the municipal waste stream and finding innovative ways to revalue the lowest grades of collected volumes.

4.3.1 Collection

Textile Banks

Case study findings indicate that textile banks represent the main source of collections in the UK. This confirms findings by Bartlett et al. (2013) that show textile banks to be the most widely used form of collection for commercial collectors at 36%, out of their three main routes of textile banks, door-to-door collections and charity shops. In a study into the impact of textile banks as a feedstock source on value for WRAP, Claes et al. (2012) found the majority of items to be in good condition, suitable for reuse and resale, with some items freshly laundered. This is a positive indication for the continued and growing use of textile banks to collect items suitable for reuse and recycling purposes. In order to increase the amount of re-useable textiles collected for resale, with an accompanying increase in the amount collected for recycling, increasing the number of textile banks available to donators would enable collectors to gather more items of good suitable quality for reuse and recycling purposes.

Textile banks comprised over 50% of all collections for each of the case study companies, however the banks ranged in size and location from small, roadside banks to large, local authority waste site container banks, with quality of collections varying amongst sites. IGC

raised suspicions that the quality of donations would be different between residential, retail and waste disposal locations, with better quality items collected in residential and retail environments. Indeed, LMB also expressed a similar view point regarding a link between collection locations and quality of items. LMB's main form of collection was from large shipping container sized textile banks located in civic amenity waste site. Collections from these banks were viewed by LMB as less good than those collected from Cash for Clothes shops, indicating that location does directly affect the quality of clothing and textiles collected and that locating collection sites in a retail or residential location would work to create higher quality yields than local authority waste site locations. The type of textile bank is also a key consideration for collectors as an evaluation of used textile theft by the London Waste and Recycling Board (2014) identified that textile banks had a higher rate of theft (11%) than door-to-door collections (2%), and that banks with the 'letter box' style openings rather than the increased security of 'chuted' openings were more susceptible to theft. Should collectors look to increase their yields through the use of textile banks such considerations should be central to decisions.

Charity

Textile bank collections are often carried out on behalf of or licensed by a charity creating financial benefits for both the commercial collector through volumes received and to the charity in terms of the funds raised through selling the collected volumes. It was noted by two of the three case study companies that an association with a charity had a positive effect on the quality of collected items. However, collections that arrived as unsold stock from charity shops were of poor quality but high in volume. This accords with findings from a study with I&G Cohen into the impact of textile feedstock on value by Ripper and Morrish (2012) for WRAP. This showed that although collections of unsold and surplus charity shop stock yielded the greatest percentage of clothing suitable for reuse out of eight different sources at 89%, these collections comprised of lower value items suitable only for export, as high value items had been extracted for resale by the charity shops. Regarding the high volumes received from charity shops, Bartlett et al. (2013) found that charity shops handled over 56% of all textiles collected for reuse and recovery, indicating that donating through these locations was the first choice for individuals wishing to responsibly divest themselves of unwanted clothes and textiles. Joung and Park-Poaps (2013) confirm that charitable concerns are among the three main motivating factors, alongside environmental concerns and upbringing, for those who donate instead of discard clothing.

Door-to-Door

The case study findings show collectors to have experienced an overall decline in the quality of collected items in recent times. Reasons cited for this decline included lower quality items

purchased as new, items kept in active use for longer being subject to more wear and better quality items entering into personal or peer-to-peer resale. Historically, door-to-door collections have provided the highest quality of collection for each of the case study companies, but problems with theft and unlicensed collectors have led to a decline it this method of collection. New ways to take advantage of higher quality yields collected directly from homes could present a significant area for innovation within the textile collection industry. TRAID's home appointment based 'bespoke' collection service is one model that is currently being trialled to maximise yields of better quality items. As convenience is a major factor for participation in recycling programmes (Joung and Park-Poaps, 2013) and existing habits and routines take precedence over sustainable practices for individuals (Goworek et al., 2012), creating a service which provides greater convenience and does not require a dramatic alteration of habits offers the possibility of making donation rather than disposal more accessible. If TRAID's bespoke service can also offer a better service in terms of convenience and saved time than resale options, collection qualities and quantities will improve from this service.

Cash for Clothes Shops

Cash for Clothes shops were viewed as providing poor quality collections by IGC, as competition for the supply of used clothing and textiles by TRAID and as providing best quality supply for LMB. In a study into the impact of Cash for Clothes schemes textile feedstock on value for WRAP Claes et al. (2012) concluded that collections from these sources yielded a high percentage of clothing suitable for reuse and resale in a range of markets. Claes et al. (2012) cite dependent variables for the quality of textile material to be the collection and storage method, type of textiles and the behaviour of individuals leading to the participation in collection schemes. Reasons for better quality collections from these sources for LMB than for IGC may be the differing location of collection areas such as London and the South East compared to the North affecting the variables cited by Claes et al. (2012). It was also stated by LMB that the Cash for Clothes collections are of better quality compared to the local authority recycling centre collections that make up the greatest proportion of LMB's supply. This indicates that Cash for Clothes retail locations within residential and local high streets ideally place them to collect higher quality items directly from donators, offering convenience and financial benefit to consumers by offering and exchange value for items which may have been previously discarded into the municipal waste stream. Benefit to collectors is also presented by collecting these better quality items. An opportunity to collect lower grade items for chemical and mechanical recycling purposes is also presented at these locations. A lower price value by weight or donation bank for low grade items would also serve to keep more items out of municipal waste streams.

4.3.2 Sorting and Grading

Processing

Sorting processes for each of the case study companies operated in a production line system utilising conveyor belts, bins and graded category chutes, as in the findings of Hussey et al. (2009) and Botticello (2012). Numbers of sorting staff varied between 20 and 40 operatives, depending on the size of the textile collection operation. As an industry reliant on manual labour, human error and accuracy were issues for the sorting processes, with some better quality items ending up in lower quality product grade categories. Increased accuracy and specialisation in sorting processes were thought to create more value by the case study companies by creating higher quality and more specialised product grades, as increasingly demanded by wholesale export clients. As stated by Palm et al. (2014) the efficiency and precision of the sorting process is dependent on how experienced workers are, as identifying garment categories and fabric types by sight and touch alone takes time to master. Recent advances in technology offer scope for creating greater efficiency and accuracy in the sorting process. One such advancement is hyper-spectral imaging, in which a camera able to capture a broad spectrum of wavelengths is used to identify the fibre composition of textiles (Humpston et al., 2014). Such technology is only really useful in identifying recycling grades, as discernments on style and quality still rely on trained and sensitive human judgment in order to extract the most value.

Waste

The sorting process produced various forms of waste, from plastic bags and cardboard which collections arrived packed in, to soiled, damaged, damp and overly worn out textiles unsuitable for resale. In specifications outlined for ‘charity shop grade’ collections of surplus stock sold on to collectors and reprocessors the Textile Recycling Association (2014) states that:

“All items should be clean and dry, and should exclude pillows, cushions, duvets, carpets, balls and cones of wool, offcuts from manufacturing process and unfinished garments, hard toys, books and bric-a-brac, coat hangers, sharp objects and single odd shoes.”

LMB classify such items as ‘contamination’ in their own material specification guidelines, but do outline their own provision to dry what they classify as ‘wet rag’ collections at a cost of £400 per tonne (LMB & Co, 2014). Despite such specifications, bedding items, such as duvets and pillows were landfilled at two out of the three case studies, with only one able to export some items for minimal value. These bedding textiles represent an opportunity to supply feedstock

for mechanical and chemical textile reprocessing, should the appropriate markets become a viable part of the system revaluing and recirculating collected textiles.

4.3.3 Value

Cost Data

In order to compare the data collected during the longitudinal study with IGC with UK averages, data from Letsrecycle.com (2016) and WRAP (2016) was used to provide a broader view on the used textile market in the UK. For comparison, textile bank and charity shop prices have been used as these are the two most widely collected forms of textile price data available. These two categories are defined by each data source as follows:

'***Textile banks*** *– this reflects the amount that may be paid to a local authority or a waste management company, usually by a collector for material from textile banks. The payment may be amended if the local authority has to pay a bank hire fee or an element of the collection costs and if a donation is made to a charity.'* (Letsrecycle.com, 2016b)
'***Shop collections*** *– this price indicates the amount which may be paid by a collector to a charity shop for clothes the shop has not sold to the public directly. Prices vary on content from poorer quality material through to clothes and leather items.'* (Letsrecycle.com, 2016b)
'Banks *– the value that textile bank operators will pay to the bank beneficiaries such as the named charity or local charity when the banks are owned, sited, serviced etc by the operator.'* (WRAP, 2016b)
'Charity shop *- the value that a charity receives for charity shop clothing sold to merchants that collect the garments from the shop.'* (WRAP, 2016b)

Textile Bank Costs

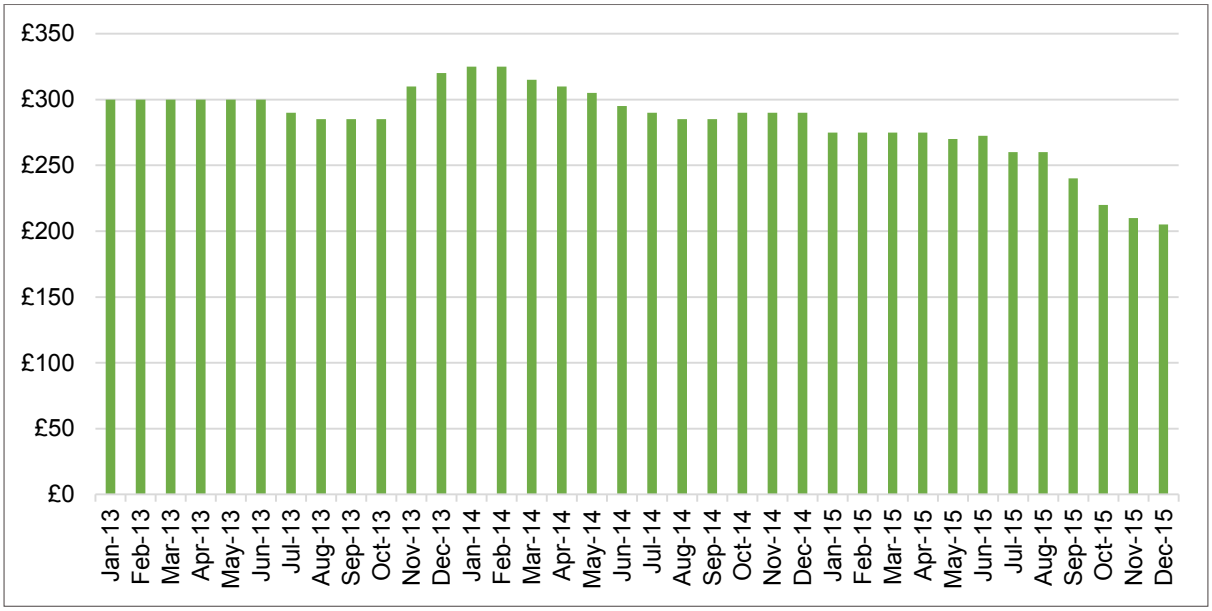


Figure 30. UK average textile bank collection prices per tonne (letsrecycle.com)

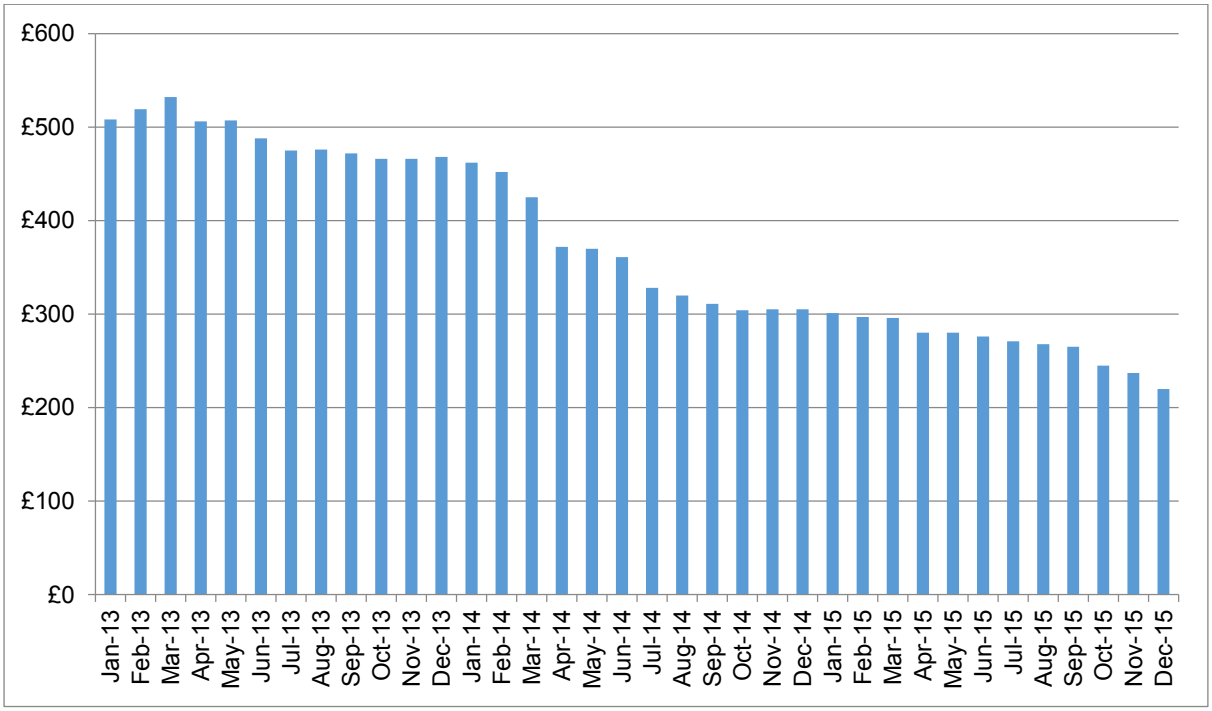


Figure 31. IGC average textile bank collection prices per tonne

Comparing UK textile bank collection prices collated by Letsrecycle.com (2016) and WRAP (2016) to those of IGC throughout the three years of the longitudinal study (Table 13), it can be seen that collection costs for IGC fell by ~10% from 2013 to 2014, and ~35% from 2014 to 2015, as did prices reported by WRAP. Prices reported by Letsrecycle.com rose by ~10% between 2013 and 2014, before falling by ~15% between 2014 and 2015. Variances in data

sources may explain the different prices reported by both Letsrecycle.com and WRAP, indicating the instability and fluctuations present in the market for extant textile collectors supplying the data. Prices reported by both Letsrecycle.com and WRAP were significantly lower than those paid by IGC for their textile bank collections, although by 2015, price differences between IGC and the national averages were much smaller. Falling prices impacted on overall costs for IGC by reducing the monthly cost of sourcing textile bank collections, despite collection volumes remaining high.

Table 13. Textile Bank Collection Prices

Textile Bank Collection Prices	**IGC**	**Letsrecycle.com**	**WRAP**
January 2013	£508 per tonne	£300 per tonne	£400 per tonne
January 2014	£462 per tonne	£325 per tonne	£370 per tonne
January 2015	£301 per tonne	£275 per tonne	£258 per tonne

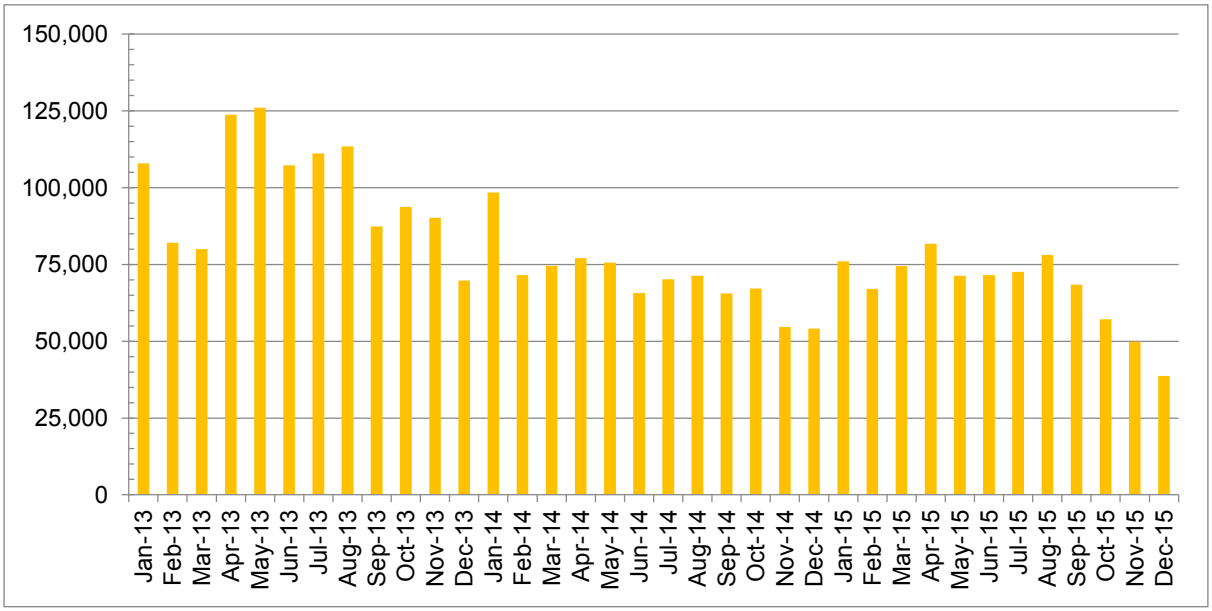


Figure 32. IGC total textile bank collection costs (£)

Charity Shop Costs

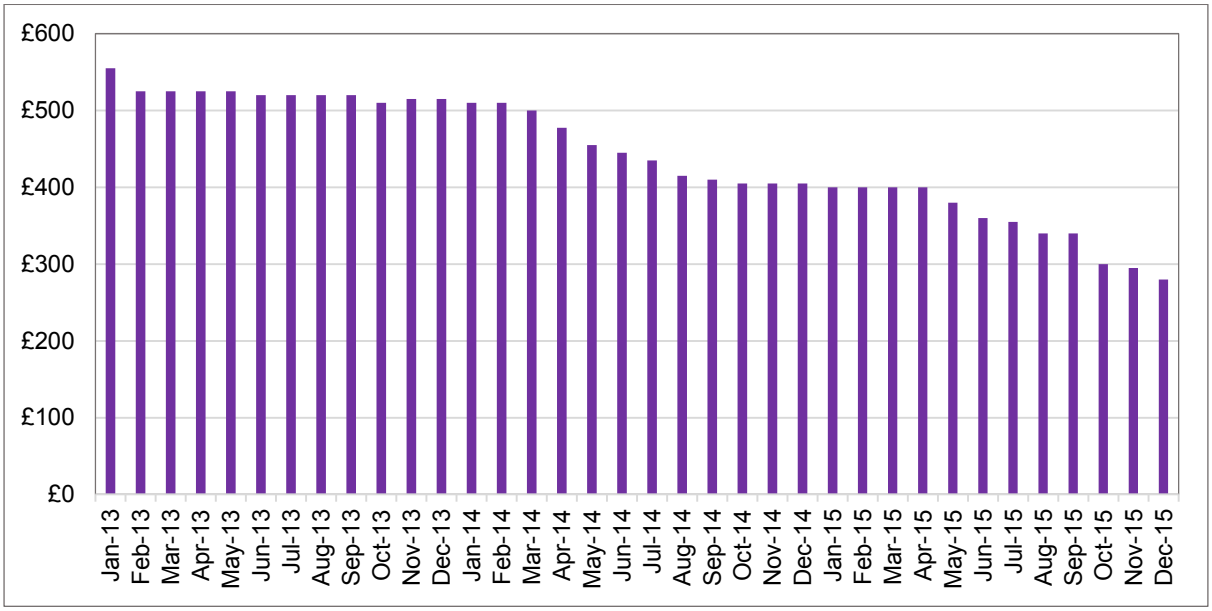


Figure 33. UK average charity shop collection prices per tonne (letsrecycle.com)

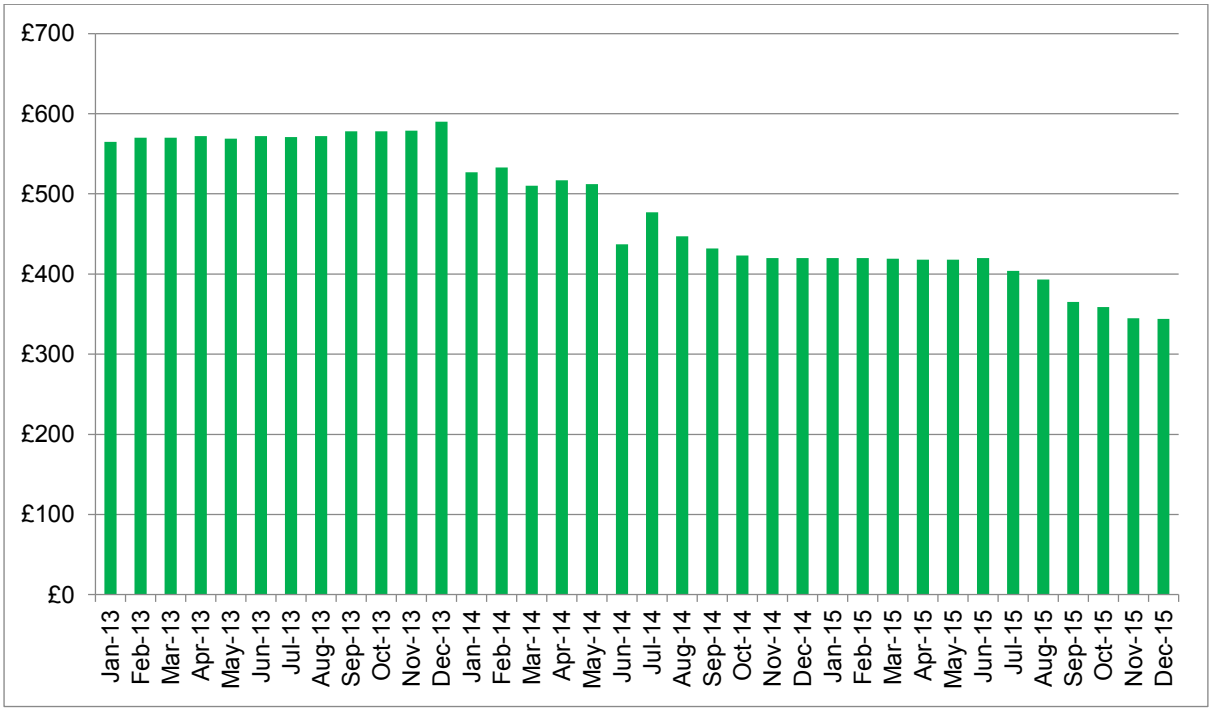


Figure 34. IGC average charity shop collection prices per tonne

In Table 14 comparing UK charity shop collection prices to those paid by IGC over the three year study it can be seen that for both IGC and according to Letsrecycle.com prices fell following a similar pattern, reducing by ~10% between 2013 and 2014 and by ~20% between 2014 and 2015. Price data provided by WRAP shows a different scenario of ~10% rise in charity shop prices between 2013 and 2014, followed by a steep drop of ~30% between 2014

and 2015. Again, differences may be due to the different data sources for Letsrecycle.com and for WRAP. Although prices for IGC fell over the three years, charity shop collections increased in volume resulting in an increased monthly expenditure by IGC on this source. An increased prevalence of charity shops on UK high streets plus an increase in unsold stock due the falling quality of original donations may account for these findings.

Table 14. Charity Shop Collection Prices

Charity Shop Collection Prices	IGC	Letsrecycle.com	WRAP
January 2013	£565 per tonne	£555 per tonne	£410 per tonne
January 2014	£527 per tonne	£510 per tonne	£450 per tonne
January 2015	£420 per tonne	£400 per tonne	£328 per tonne

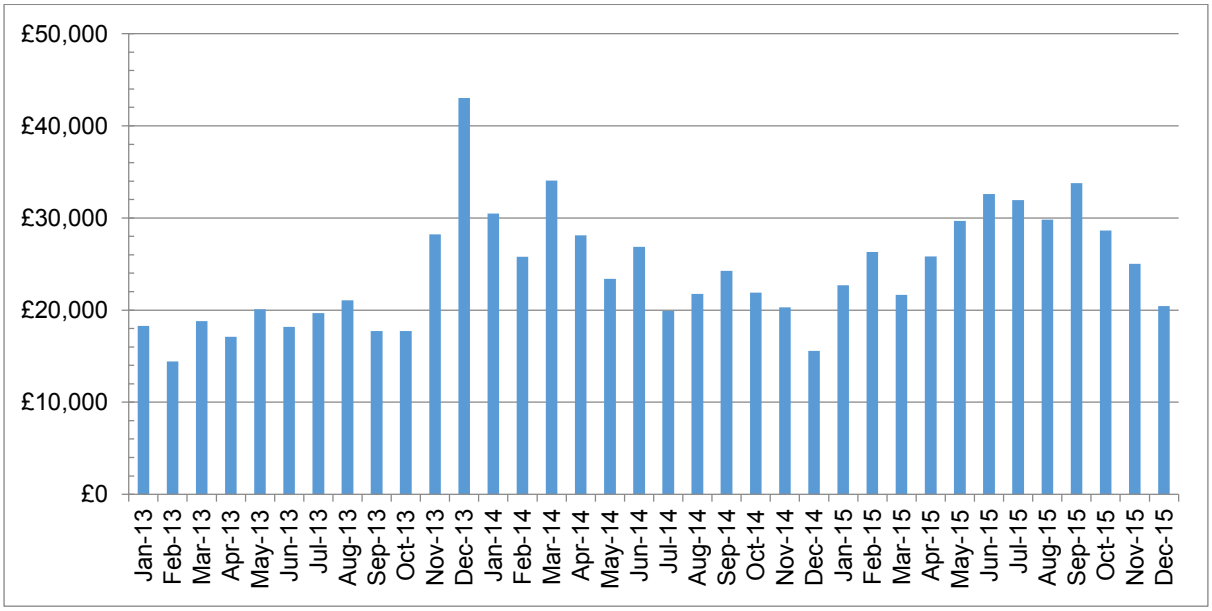


Figure 35. IGC total monthly charity shops goods in costs (£)

Collection Costs

As can be seen in Figure 24, average collection costs across all sources for IGC also fell over the three years, from nearly £600 per tonne in January 2013, to just under £500 per tonne in January 2014, down to just over £300 per tonne in January 2015. As shown in Section 10.1.8 of Appendix A (page 289 to 330), for IGC, textile bank collection volumes remained fairly stable with a slight increase over the three year study. Charity shop volumes also increased significantly, however for all other textile collection sources volumes fell, indicating that for IGC, textile banks and charity shops remain as the two main sources of goods in.

Collection Volumes

Reports on collection volumes between case study companies reflect the varying success and scope of each strategy. For example TRAID report collection of ~200 tonnes per month, the lowest volume of the three case study companies. This is collected from a network of ~1500 textile banks, 11 charity shops and various commercial collectors in London and the South East, as well as Bristol and Oxford. LMB however report collecting ~740 tonnes per month from local authority recycling centre banks and textile banks around the UK, mainly in London and Norfolk. Geographically the two companies cover similarly sized area for collection, however the strategy of local authority waste contracts yields a much higher volume for LMB. IGC collect volumes of ~360 tonnes per month, mainly from ~200 textile banks and charity shop collections in the North and some in the Midlands. Collections were also reported to be subject to seasonal patterns, with summer months the busiest and winter the quietest time of year.

Sales

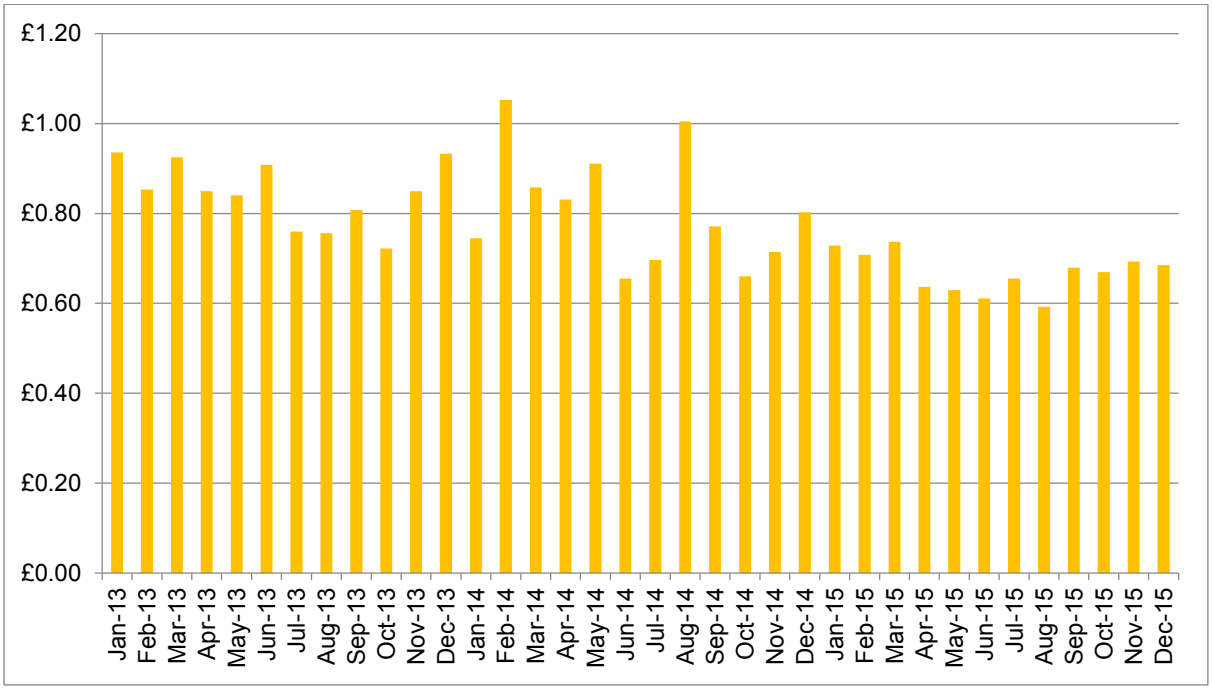


Figure 36. IGC Average Sale Price per Kilogram

Sales of sorted and graded clothes and textiles were sold in bulk quantities by all the case study companies, often filling shipping containers for wholesale export orders to Africa and Eastern Europe, as well as Pakistan. This is confirmed by a report from WRAP (2016c) which cites African countries such as Ghana and Togo, EU countries such as Poland and Hungary, and Asian countries such as Pakistan as the UK's main export market for used textiles. UK retail and wholesale establishments were also supplied by and owned by the case study companies. These ranged from charity shops, vintage boutiques, vintage wholesalers, and wiper manufacturers. Seasonal patterns reported in sales indicated that for IGC the busiest months were September, October and November, especially for the African market. The closure of Eastern European markets during the summer months links to a net loss each July for IGC, as well as a build of supply and stored inventory. Constant change in the sector from factors such as seasonal fluctuations, weather patterns and international market responses is compounded by pressure on sales prices, creating overall instability in highly uncertain markets.

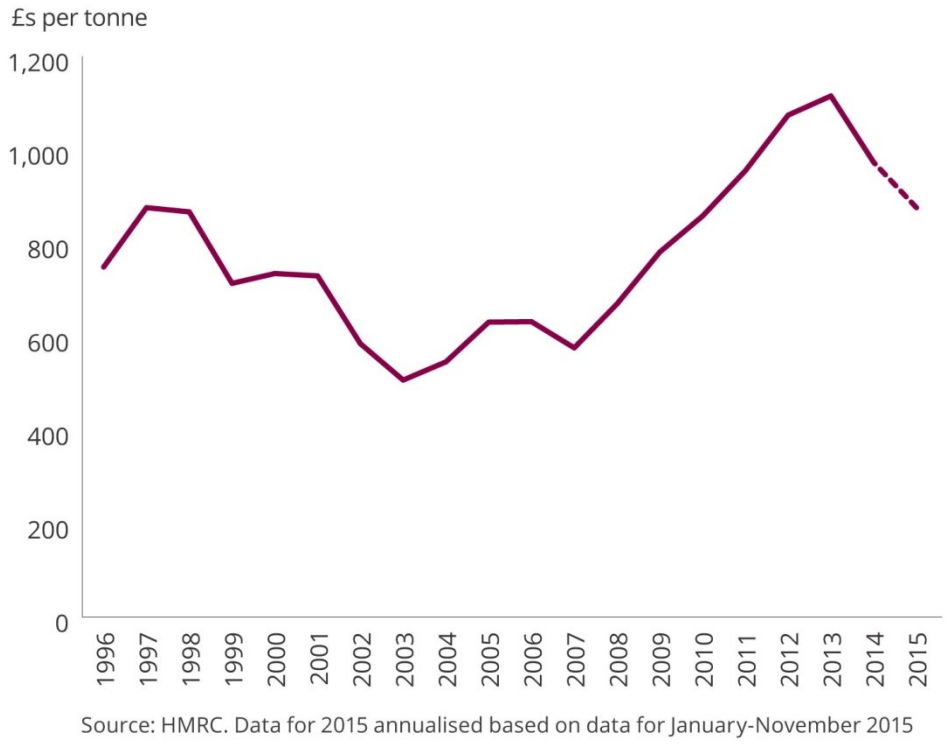


Figure 37. Value per tonne of UK exports of used textiles

Shown in Figure 27, sale prices fell over the longitudinal case study with IGC, however goods in costs also fell (Figure 28), leading to fluctuations in net profit and loss, as shown in Figure 29. Factors linked to these fluctuations are the cessation of more expensive door-to-door collection in December 2014 and the decrease in sales of unsorted textile bank product bales, indicating that textile bank collections were instead being processed to meet a demand for more specialised sorted and graded product categories. The demand for collections to be sorted into increasingly more specialised grades is an indication that collectors are being driven to continually review their product offerings in order to extract more value from collections. Both falling sales revenue and goods-in costs indicate that the market is in a state of decline, with no clear pattern of profit and loss each year. The price per tonne of UK exports of used textiles (Figure 37) indicates that the market has been in decline since 2013, when value peaked at £1,115 per tonne (WRAP, 2016c). Exports volumes fell throughout the first 11 months of 2015 due to difficult market conditions such as political instability in Ukraine and economic uncertainty in Poland and Lithuania (WRAP, 2016c). Falling values and volumes are a negative sign for an industry which seeks to divert waste away from landfill, creating both cost savings and environmental savings. Should sufficient value fail to be found in collected textiles and landfill become the main route for these items, the environmental consequences would further exacerbate current pressures on sustainability (WRAP, 2016c). In order to prevent such outcomes it is more necessary than ever before to seek circular economy solutions to maximise the reuse, recycling and upcycling of unwanted textiles.

Optimisation

In order to optimise the collection and supply of unwanted textiles, decisions on the method used, its availability to the general public and its location will impact the volumes, quality and value of items received. Additional consideration such as affiliations and associations with other brands, charities and organisations should also be considered in order to reach and appeal to the widest selection of individuals. Identifying the most effective strategies to communicate with donators regarding used textile divestment will also support a strategy for increasing the yield and quality of items. Considerations such as understanding what information consumers require, how they most prefer to receive such information, how public perception of textile and clothing usage affects use and divestment behaviours and how important the factor of convenience is will provide a guiding framework for the most effective strategy in optimising clothing and textile collection. A declining profitability indicates the need for a wider range of sustainable end markets, such as domestic reuse and fibre-to-fibre markets for low grade textiles which are not suitable for the re-use (WRAP, 2016c).

5. Circular Economy Fashion

5.1 Case Study Findings - Key Informant Interviews

This chapter presents the results and analysis to fulfil the objectives for Aims 2 and 5 of the research by analysing the potential between the textile collection and closed loop fashion industries, as well as determining the strategies currently used and knowledge needed by upcycled and sustainable fashion brands to bring products to market and effectively communicate with their consumers. Also presented are the design and production processes currently used by upcycling designers. These findings provide vital information to the development of operational framework to integrate circular economy fashion strategies into mainstream production and retailing. The results and analysis of the interviews also contribute directly to Aims 3 and 4 of the research, by identifying areas of consumer inquiry relevant to circular economy fashion, and indicating the most effective strategies to implement the consumer survey findings into circular economy fashion communication.

5.2 Thematic Analysis

Presented in this section is the thematic analysis of the five main areas emerging from the key informant interviews of: design and production, the fashion industry and sustainability, communication, consumers, and creating change. Five sustainable fashion experts and ten fashion brands were selected for case study research using purposive sampling based on their specialist knowledge and experience of the industry and their distinct and varied perspectives representing the range of market levels present in the fashion industry. The brands ranged from higher profile labels that showed regularly on and off schedule at London Fashion week, to medium sized enterprises with their own bricks and mortar premises, smaller labels and start-ups, producing limited collections for loyal customer bases, mainly reached through social media, and one charity retailer. An in-depth summary of the themes, sub-themes and illustrative quotes extracted from all the interviews conducted is presented in Appendix D from page 352 to 391. Where cross over between interview data from textile collection organisations and circular economy fashion emerged, these comments are also included under the appropriate theme.

5.2.1 Theme 1: Design and Production

53 references to design were made on 13 occasions, and 59 references to production were made on 13 occasions. Informants discussed the stages of design and production within an ethical fashion brand, and how sustainability could be integrated into each stage. The design brief was felt to be key to initialising the process of sustainable design and setting out key considerations. Sourcing for upcycling used only what was available at the time, instead of

requiring newly produced materials. Designing from a slow fashion perspective meant breaking with seasonal patterns and the design process in upcycling used mostly traditional, creative methods such as mood board and toiles, although had a more flexibility for substitutions of fabrics, according to supply. Sales and feedback were carried out through online and in store contact with consumers. Issues with selling in the right market were discussed, as some informants had experienced difficulties in selling upcycled clothes in a charity shop, where customers had come to find much lower cost purchases. Promotion was also carried out through online and in store contact with consumers, with social media featuring heavily once again.

Table 15. Key informant data: Design and Production

Theme	**Design and Production**
Sub-theme	The Design Brief
Summary	How to produce sustainably, with the use phase in mind
Quote	“This question of ‘How do we do it?’ is the fashion professional’s design brief.”
Sub-theme	Sourcing
Summary	Making best use of what materials are available at the time, and allowing this to inform and complement the design process.
Quote	"We have to buy what we get. That’s the thing with upcycling, that you have to just use what is there already."
Sub-theme	Slow fashion
Summary	Slow fashion departs from the traditional dictates of fashion seasons
Quote	"We want to stop people thinking about clothes having that predetermined sell by date. It’s just what we are producing at the moment."

Sub-theme	Design
Summary	Designs created in upcycled design utilise the same traditional and creative processes as in regular fashion design.
Quote	“With the design process, I’ll start by going off and doing my research, all sorts of stuff like that, make some mood boards."
Sub-theme	Flexibility of design formula
Summary	A flexible design formula in upcycling allows for fabric substitutions to take into account the changeable nature of material supply.
Quote	“I think you have to have panelling. Most of the pieces have panelling somewhere because we rarely get metres and metres and metres of stuff. So that makes it a lot easier."
Sub-theme	Sales and Feedback
Summary	Social media and in-store dialogue are key conduits for consumer feedback, as is repeat custom.
Quote	“But on the whole it is just knowing what sells well. That is the biggest indicator to us of what people like and what they want.”
Sub-theme	Selling upcycled clothing in charity shops
Summary	Consumers would often be seeking low cost garments in a charity shop, and would not be prepared to buy the more expensive upcycled design items.
Quote	“People might look around and see something that they like in TRAIDRemade, but then probably find a bargain for 15 quid and just buy the second-hand thing instead… "

Sub-theme	Selling upcycled clothing in a dedicated shop
Summary	A more successful strategy was felt to be a dedicated upcycling and sustainable fashion show, such as at the FARA Workshop or Here Today Here Tomorrow.
Quote	“It was always the idea to have a separate shop, so we complement the charity business, but we are a separate shop."
Sub-theme	Finding the right market for upcycled clothes
Summary	The lack of success of selling upcycled clothing made with post-consumer textiles may be linked to the practice of selling into the wrong existing markets, indicating that new markets needed to be created.
Sub-theme	UK and Overseas markets – Germany
Summary	UK buyers were still behind those in overseas markets such as Germany in their understanding of the variability of upcycled stock.
Quote	"I think there is less of a neurosis about what they are going to get and maybe they are more accustomed to recycled fashion and upcycled fashion than buyers here. "
Sub-theme	Promotion
Summary	Social media and in-store dialogue were thought to be key strategies for communication.
Quote	"Probably the main way that people can respond back to us is when they are here face to face, and those who are engaged enough to start those conversations on Twitter or on Facebook."

Sub-theme	Production
Summary	Production processes in upcycled fashion are characterised by their labour intensity which adds to the final cost to the consumer, often resulting in brands remaining small and niche.
Quote	"You have a small collection all your production costs are really high but then if you want to produce more to get better prices... where are you going to sell it?"

5.2.1.1 The Upcycling Process Model

Building on a model developed from initial interviews during MSc research into upcycling in the UK womenswear industry (Han, 2012), designers were also for feedback on how faithfully this model represented their current design and production processes. Processes may be investigated in real time through participant observation, through retrospective interviewing or by constructing a processual account through the examination of documents (Bryman, 2012).Taking this feedback into account, a revised upcycling process model was been created to show the continual feedback loops between sourcing and each stage of the upcycled design and production process. In graphically documenting a process and showing the interrelated and overall view of various aspects of the system, a holistic analysis can take place (Jacka and Keller, 2009). Five upcycling brands plus the researcher's own upcycled design practice were consulted to develop the initial upcycling process model presented in Section 10.4.1.3.13 of Appendix D from page 380 to 383. In this second round of research, six designers from five brands were able to give feedback on the initial model. Of these six designers, three were also from the initial round of research in which the first model had been formulated. Feedback from designers presented in Section 10.4.1.3.4 and Section 10.4.1.3.13 of Appendix D, regarding each stage of the process model was used to further refine the initial model and create a truer representation of the professional fashion upcycling process which can be used to inform scaling up the process for mainstream retail.

The design brief outlined the task of producing garments in a sustainable way, taking into account all lifecycle stages, including the use phase and end-of-life considerations. This initial stage was felt to be the key opportunity for integrating sustainability into the entire design and production process, setting out how these considerations would be incorporated along the whole supply chain. When producing upcycled fashion, the sourcing stage must occur near to the very beginning of the design and production process. As this form of sourcing uses only

what is available at the at the time in the form of post-consumer or post-production textile waste, instead of requiring newly made materials, it is necessary for designers to spend significant amounts of time researching where materials will be available, how suitable they are for designs and how much is available. This stage of research must occur before initial sourcing, to obtain the right fabrics needed for design and production to occur. After initial sourcing, fabric sourcing for upcycled design then continues on throughout design and production.

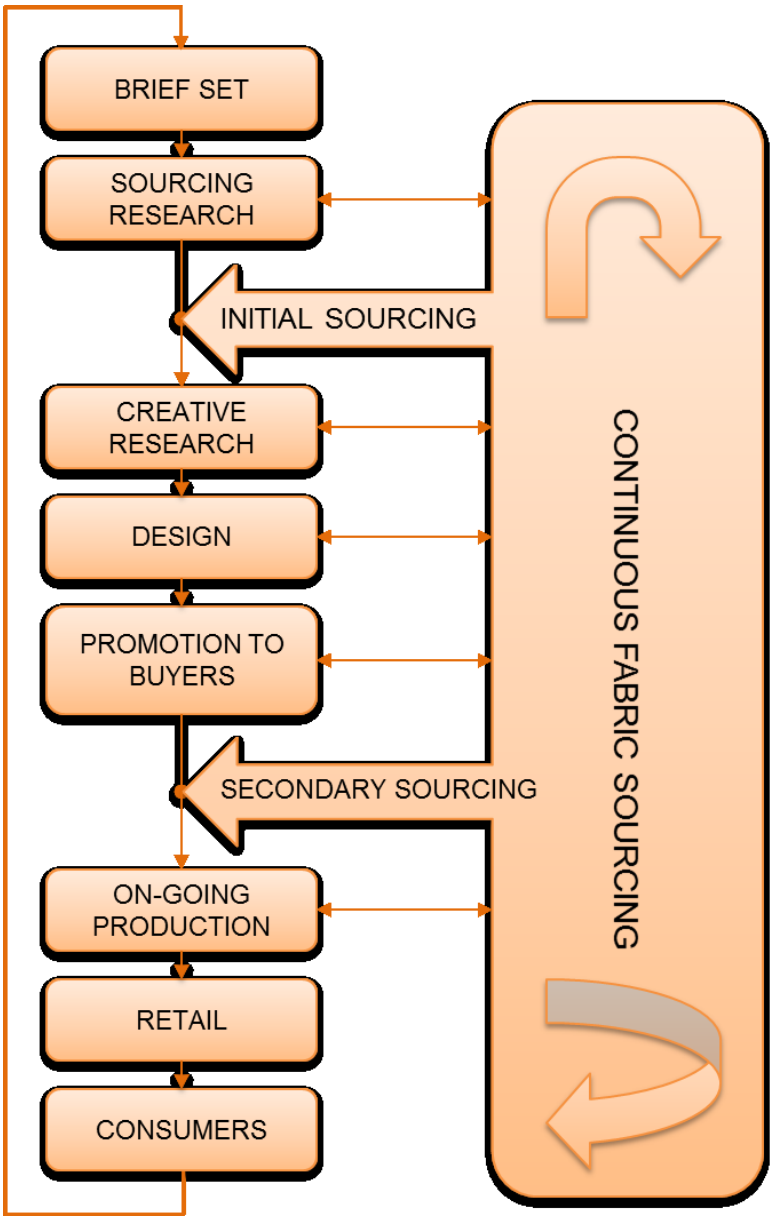


Figure 38. The Revised Upcycling Process Model

As a circular economy fashion strategy, upcycled fashion design tends not to follow the traditional fashion seasons of Spring/Summer and Autumn/Winter, but instead pursues a slow fashion course, gradually adapting designs according to available source materials. This enables popular pieces to be made available on a regular basis and to be adapted according to customer feedback, current trends and changing fabric supply. Along with the feedback from customers, creative research also directly precedes the design stage. Upcycled fashion design uses the same traditional creative processes as standard fashion design such as moodboards, sketches, toiles and design research and inspiration. Once designs are created, a noticeable departure from traditional fashion design can be observed in the pattern cutting and fabric combinations. Upcycled designs have a distinctive design formula which allows for fabric substitutions, taking into account the changeable nature of fabric supply. Often panelling and a structured 'patchwork' style of pattern cutting make best use of limited and changing material sources. Interchangeable pattern pieces can be substituted at design level or at manufacturing level to make best use of available resources. This flexible design formula clearly defines the unique aesthetic of upcycled fashion.

The extra work required in sourcing materials and creating smaller production runs of designs made from multiple fabrics can often lead to higher retail prices for upcycled garments. This further emphasises the need for consumer understanding of upcycled and ethical fashion for successful retail. Social media and in-store dialogue with customers provide opportunities to engage the public with these issues and provides an opportunity to receive feedback. Repeat custom also serves to provide key back on successful designs. Difficulties have arisen when upcycled designs have been sold alongside second hand garments in a charity shop. Several informants described this as a situation in which consumers were shopping for low cost items in a charity shop, and were not seeking higher priced upcycled pieces. The difficulty of competing with much lower priced items was an indication that charity shops were definitely the wrong place to sell upcycled designs. Informants felt that a more successful strategy was to have a dedicated upcycled and sustainable fashion shop, even if this were also to be part of the charity, but separate to the charity shops selling second hand clothes. Selling upcycled fashion in a charity shop may also be affected by the stigma of second hand clothing which some consumers feel, preventing these more biased consumers from entering into the charity shop selling upcycled designs which they may have in fact found to their approval.

Finding the right market for upcycled designs has been a constant challenge to the industry, and most labels working solely with post-consumer textiles have had difficulty scaling up and continuing to trade on a long term basis. Labels using a combination of pre- and post-consumer textiles, or switching to solely pre-consumer textiles have experienced more success scaling up their operations and producing wholesale supply. One informant discussed

these differing approaches and questioned whether the limited success experienced when using post-consumer supply was linked to the practice of selling into the wrong existing markets, indicating that new markets needed to be created. Difficulties were also faced when selling upcycled collections to retail buyers in the UK. Limited understanding of the variability of upcycled stock and fears of poor quality presented barriers to the wider acceptance and retailing of upcycled fashion. More success has been experienced when selling to shop owners and retail buyers in locations such as Germany. Informants also discussed their current strategies of promoting their designs and communicating the features and benefits of upcycled and sustainable fashion. Once again social media and in-store dialogue were the main methods. Providing enough information about the products ethical credentials and origin of the source materials needed to be carefully balanced against showing garments for their aesthetic appeal.

Utilising upcycling as a circular economy fashion strategy can present challenges of labour intensive production, extensive fabric sourcing research and increased promotional work ensuring consumer and retail buyer understanding of the garments produced. This can often add to the final retail price, making upcycled fashion unaffordable for many, resulting in limited company revenue for brands to grow their business and benefit from economies of scale. An uncertain economic climate creates further risk for brands wishing to secure finance to scale up production, leading to a lack of long term success for some brands and designers. Investment into the industry could ensure wider success, although recent media emphasis on corporate social responsibility may also lead to a wider adoption of the principles of upcycling for larger, well established retail brands. For these brands, it will be necessary to equip their designers with the necessary skills, knowledge and agency to make decisions affecting production, labour and materials, as well as the use phase and end-of-life considerations to truly implement a circular economy fashion system.

5.2.2 Theme 2: The Fashion Industry and Sustainability

59 references relating to the fashion industry and sustainability were made by the key informants, on 12 occasions. Themes discussed in relation to the fashion industry and sustainability were a lack of mainstream media and industry acceptance of sustainable brands and ethical practices, with much of the widespread bad practice remaining hidden from consumers, who are however becoming increasingly aware of the problems. A dichotomy exists for sustainable fashion, as the fashion systems itself is built on transience, trends and perceived obsolescence. Even efforts to create sustainable and ethical fashion may still be operating within a damaging neoliberal system that perpetuates current problems. The introduction of sustainable practices such as mending and upcycling are in danger of being co-opted aesthetically to create new products, which would be as susceptible to trend, transience and waste as ever. A radical cessation of all production save for the most essential of personal garments may work to stem the excess of materials and resulting waste endemic to the industry, but questions arise on how feasible this would really be as a realistic solution.

Table 16. Key informant data: The Fashion Industry and Sustainability

Theme	**The Fashion Industry and Sustainability**
Sub-theme	Mainstream acceptance
Summary	A lack of mainstream media and industry acceptance of sustainable brands and ethical practices
Quote	“It is about the price points, but you are not going to get the price points until you get mass acceptance of people using these things on a massive scale."
Sub-theme	Dichotomy
Summary	A dichotomy exists for sustainable fashion, as the fashion systems itself is built on transience, trends and perceived obsolescence.
Quote	“The fashion industry worked quite hard to create a public image that has got nothing to do with where the things come from."

Sub-theme	Obsolescence
Summary	Consumers can become convinced that they need to purchase new products by trends in the current fashion system.
Quote	"People want something new and the human nature and the drive and the desire to have new things is what is what's always fuelled fashion, for clothes and products and everything. "
Sub-theme	Neoliberlism
Summary	Even efforts to create sustainable and ethical fashion may still be operating within a damaging neoliberal system that perpetuates current problems.
Quote	"The most eco, ethical fashion does not threaten or disrupt the capitalist model, it feeds it."
Sub-theme	Co-option
Summary	The introduction of sustainable practices such as mending and upcycling are in danger of being co-opted aesthetically to create new products, which would be as susceptible to trend, transience and waste as ever.
Quote	"...then you can buy in the high street, something that has been produced with sweatshop labour...something that comes ready darned, which is nothing new because we have been wearing ripped jeans for ages."
Sub-theme	Stopping production
Summary	A radical cessation of all production save for the most essential of personal garments may work to stem the excess of materials and resulting waste endemic to the industry.
Quote	"Sustainable fashion means using up the extreme material excess we have created over the last several decades."

Informants discussed a lack of industry acceptance of sustainable brands and ethical practices. It was felt that there was a reluctance to uncover bad practice, despite growing consumer awareness. Support from larger brands and industry was felt to be vital to instigate any sort of change within the industry. Informants felt that the fashion industry could be doing more to promote sustainability, by allowing designers, product developers and buyers to make

use of sustainable options. For some informants, the idea of sustainable fashion appeared to be a paradox in itself, as fashion is itself predicated on the ideas of transience, constant newness and limitless consumption, ideas that are contrary to the core values of sustainability. The idea of perceived obsolescence, in which consumers believe they need to replace serviceable items with new products due to trends in the current fashion system is directly at odds with sustainable practices to reuse, repair and maintain.

One informant described her viewpoint that ethical fashion still operated within the capitalist model that was causing and perpetuating the very problems ethical and sustainable fashion was working to alleviate. The introduction of sustainable practices such as mending and upcycling are in danger of being co-opted aesthetically to create new products, which would be as susceptible to trend, transience and waste as ever. The example of purposefully ripped jeans sold as fashion items was given, with ready patched or darned fashion items being a stage on from the ripped jeans. A radical cessation of all production save for the most essential of personal garments may work to stem the excess of materials and resulting waste endemic to the industry, but questions arise on how feasible this would really be as a realistic solution. Circular fashion strategies such as upcycling and the use of recycled textiles may work towards utilising the waste produced by the fashion industry, as production techniques work towards greater circularity and lower impact solutions to meeting the clothing needs currently presented.

5.2.3 Theme 3: Communication

86 references to communication were made on 12 separate occasions by the key informants. Main strategies for communication cited were in-store dialogues with customers and social media. In-store dialogues gave brands a chance to connect on a personal level with customers who had already shown an initial interest. Social media also allowed brands to connect with customers about their ethos through related content and stories. Communicating upcycling or sustainable fashion to consumers was best achieved by emphasising the style, design and uniqueness, rather than ethical credentials. Connecting consumers to the story and emotional link of how garments were made and who by was thought to appeal more than the environmental aspects. Informants also discussed how they conducted any market research or if this was missing from their activities. Many also expressed a dissatisfaction with the way sustainable fashion was portrayed in the media.

Table 17. Key informant data: Communication

Theme	Communication
Sub-theme	In-store
Summary	Knowledgeable brand owners on hand to advise and share the stories of the products that appeals to their customers.
Quote	“So I think for us it’s just having a shop. We just start getting direct feedback. We know what customers like and what they don’t like.”
Sub-theme	Social media, PR and press
Summary	Social media was cited as the main method communication with consumers
Quote	“Obviously since social media has come along it has been a lot easier to kind of gauge who your audience are and directly market to them.”
Sub-theme	Big brands using social media
Summary	For large multi-national brands customers are providing market information and asking questions.
Quote	"Quite often it seems to be coming from the feedback mechanisms they have on their social media, through their blog, through their website."
Sub-theme	Communicating upcycling to consumers
Summary	Appealing to consumers through the design and style rather than the ethics was the most successful approach.
Quote	“Then the best is to start from the design side and show how cool the design is. And how you can use materials that were already used."

Sub-theme	Story and emotional link
Summary	Consumers found human stories about workers easier to connect with than more abstract ideas about climate change and environmental degradation.
Quote	"I think people are more interested in knowing who has made it, where the fabric came from, if it had a story."
Sub-theme	Market research
Summary	Talking to their current market was their main form of market research.
Quote	"We always try and work out who they actually are and why they are motivated to buy."
Sub-theme	Media and communication
Summary	Although the mainstream press has been covering the issue, it was still falling short.
Quote	"I think we need a lot more kind of support from media in general... to help people understand what they can do, what they should be doing, and why."
Sub-theme	Integrating into the mainstream
Summary	Ethical fashion needs to be integrated instead of being treated as a novelty.
Quote	"You just don't get a Goodone piece put alongside a Chanel jacket in deep summer in Elle magazine. It doesn't happen, it's still so segregated."

Informants outlined current circular economy fashion communication strategies for brands and designers, including in-store dialogue, social media content, public relations agencies and editorial. In-store dialogues for brands with their own premises presented a chance to connect with consumers and share stories of how items had been produced. This provides a unique shopping experience and enables brands to equip consumers with information about the fashion industry in an engaging and non-confrontational manner. It also provides an opportunity to gauge consumer reactions to new products, services, price points and information provided, offering vital feedback for these businesses.

Social media was perhaps the most widely used strategy to connect with a wider audience. Sharing related content and stories allowed brands to communicate their ethos to through non-product related posts. These posts also communicate a lifestyle, ethos and experiences to an audience which has already shown an initial interest sustainability issues. Social media was mentioned time and again by the key informants as their main communication strategy, allowing brands to collect feedback and market research, and to tell the story of their company by openly associating with issues and causes they found important, and other brands and designers which they supported. By more easily gauging audiences through social media, directed marketing strategies could be put in place by the brands to offer consumers the most appropriate products. Social media also affords brands the opportunity to respond expressly to questions from customers in an open forum.

In communicating upcycled fashion to the public and emphasising its appeal, informants tended towards an opinion that establishing qualities of design and style before ethics would be a more successful strategy in engaging consumers. Once desirable fashion aesthetics had been achieved, it would then be possible to inform consumers about sustainable credentials, provenance and garment care practices. Using language and terms which consumers would find clear and engaging was also important, as for some consumers, psychological barriers to accepting second hand textiles may exist. In creating engaging information around sustainable fashion, it was also felt that consumers found human stories about workers easier to connect with than more abstract ideas about climate change and environmental degradation.

To find out more about their present and potential customers, current forms of market research ranged from social media and in-store feedback to expressions of regret at a lack of market research or complete disconnection from the marketing side of their business altogether. For the majority of key informants, talking and connecting with their customers was their main form of market research, although there was a recognised need to appeal to a wider audience than just those who were engaged with issues of sustainability. For some brands it was not explicitly clear how to go about this, and a certain measure of scepticism was expressed once again regarding the ‘values-action gap’. Queries were raised about how to close the gap between expressed intentions and actual purchasing behaviour.

Informants also felt that efforts from the mainstream media and fashion press to cover sustainable fashion were disappointing. On the one hand the media have covered stories about working conditions and labour rights abuses in Asia, but on the other hand, responsible alternatives to consuming products made by the companies creating injustice were not shown in any meaningful way. It was felt that sustainable alternatives were often shown as a novelty

and not integrated into mainstream media and fashion as equal and viable options to the current offerings and methods of consumption.

5.2.4 Theme 4: Consumers

138 references to consumers and consumer behaviour were made on 18 separate occasions by key informants. Views expressed about fashion consumers by sustainable fashion designers, brands and experts ranged from assumptions that consumers did not know anything about ethical or environmental issues in the fashion industry to views that consumers did know but just did not care. The general consensus was that either way, consumers were driven by price, first and foremost, and then by the design and style of clothing, with other factors such as quality, functionality coming next and ethical issues last, if at all. A key sub-theme to 'consumers' was the 'values-action gap', in which informants discussed how consumers would express intentions to shop ethically or sustainably, but then return to buying from regular high street or value fashion retailers.

Table 18. Key informant data: Consumers

Theme	**Consumers**
Sub-theme	Consumers own knowledge
Summary	Consumers are unwilling to or unaware of how to change
Quote	"...this consumer focused industry creates cognitive dissonance..."
Sub-theme	What it is important to know about consumers
Summary	Design and price come first. Ethics are a bonus.
Quote	"What they really want is just to know that everything is OK without them having to do anything to find that out."

Sub-theme	Consumers don’t care
Summary	Design and price can convert consumers to sustainable purchases
Quote	"...you've got people that don't really care, and they are buying it for design and price.”
Sub-theme	Knowing what consumers want
Summary	What would appeal to consumers in these markets in terms of wants, needs and preferences
Quote	“They want the latest thing, and they want the cheapest price.”
Sub-theme	Knowing what consumers will spend
Summary	What price ranges consumers are looking for
Quote	“I think our garments are priced comparatively to the high street. Our price point goes from £30 to £100 / £120..."
Sub-theme	How to design for consumers
Summary	How products are designed and how they look was the most effective way of appealing to consumers.
Quote	“You’ve just got to make a really great product. It’s got to be what people want.”
Sub-theme	Uniqueness of designs
Summary	The one of a kind exclusivity of upcycled designs was appealing for consumers.
Quote	"People like the fact that is it limited edition, which is inherently connected to the fact that it is upcycled."

Sub-theme	Do they buy for quality?
Summary	How do consumers view the quality of fast fashion?
Quote	“That would be very interesting, to know people’s opinions towards fast fashion and quality.”
Sub-theme	Do they buy for function or need?
Summary	Do consumers seek functionality and high performance from their clothing?
Quote	“I am interested in whether people want things to perform that well.”
Sub-theme	Social status and stigma
Summary	Social stigma still exists towards second hand clothing
Quote	“But then a lot of people don't like buying second-hand clothes because they think it's dirty. They just don't like it.”
Sub-theme	Do they care about ethics?
Summary	Do consumers care about the ethics of how their clothes were made?
Quote	“The consumer that is not interested in who makes your clothes or ethical issues is a very difficult consumer to sway."
Sub-theme	The values-action gap
Summary	How to convert customers who expressed sustainable consumption intentions into actual sales
Quote	“What do we need to close that gap? Is it better marketing? Is it better advertising? Is it better sex appeal? Is it better kudos with your friends?”

Informants expressed the opinions that consumers were, on the whole, unwilling to acknowledge or unaware of how their consumption behaviour contributed to wider problems caused by the fashion industry. The idea of cognitive dissonance, in which individuals

experience discomfort when holding two conflicting beliefs (Sun and Guo, 2013) was discussed in relation to continued consumption in the face of growing ethical awareness. When asked about what it was important to know about consumers, the consensus from key informants was that design and price were the most important factors for consumers. Knowing what they were willing to spend and what sort of designs and styles they were looking for, as well as other aspects of their lifestyles which could identify their preferences was of importance. Informants were of the view that ethics were unimportant for most consumers and would only be viewed as a secondary benefit. In order to make sustainable fashion desirable for most consumers, it was felt that the right designs had to be offered at competitive prices. Unique designs and limited edition supply created by upcycling can also create an appealing exclusivity for consumers.

Questions were raised by informants on what extra qualities consumers were seeking in garments, such as high quality, longevity, functionality and ethics, and if any of these things were important to consumers at all. The idea of social status from designer brands and labels was also discussed, as well as the inverse of the social stigma attached to buying second hand clothes. This presents a problem for designers creating garments from post-consumer textiles, as a negative connotation may be attached to these materials. A challenge is presented in how to best communicate the desirable qualities of such garments to consumers. A further challenge is also presented to circular economy designers when attempting to convert expressed sustainable consumption intentions into actual sales. As highlighted by Goworek et al., (2012), 'various studies have shown that consumers who profess to hold ethical views often do not transfer their intentions into ethical purchase behaviour, thus forming a 'values-action gap'.' In both these instances understanding current strategies used by designer and brands in presenting information, and how this information is received by consumers is key to the success of promoting sustainable fashion consumption.

5.2.5 Theme 5: Creating Change

10 direct references to creating change were made on two occasions by the key informants, however all those interviewed were working to find alternative models of use and consumption. When discussing strategies to create change in the fashion industry it was made clear that there was no easy solution to the many difficult challenges presented. Leading by example was thought to be one way, in which brands creating sustainable garments would work to change attitudes and behaviours. A move away from the systems of consumption were felt to be needed, and a more radical viewpoint of creating activism outside the system was put forward. Mending was discussed as a method of anti-consumption activism for creating

change. Additional approaches included engaging consumers through workshops, education and events, in which they could learn how to make and alter their own clothes, learn about the various negative impacts affecting the industry and take part in swap events as an alternative to shopping.

Table 19. Key informant data: Creating Change

Theme	Creating change
Sub-theme	Activism
Summary	A move away from the systems of consumption were felt to be needed, and a more radical viewpoint of creating activism outside the system was put forward.
Quote	“Everyone is battling with ‘what can we do?’ because the problem is far bigger than ourselves.”
Sub-theme	Mending
Summary	Mending was discussed as a method of anti-consumption activism for creating change.
Quote	“Mending is deeply radical. It is uniquely placed to dismantle capitalist systems of production as its very premise causes production to cease."
Sub-theme	Engagement and workshops
Summary	Additional approaches included engaging consumers through workshops, education and events.
Quote	"We want to try and connect to more people because I think it’s a really important way of spreading the word.”

Sub-theme	Education
Summary	Learning about the negative effect of the fashion industry and about alternative consumption patterns may work to create change.
Quote	“I think education is a powerful tool. It is making a major difference at the Bachelors and Masters level in countries like the UK, who have implemented components of sustainability into their entire curriculum. "
Sub-theme	Discarding
Summary	Problems of increasing waste were viewed as being directly connected to levels of consumerism for which upcycling is only ever a transitory solution.
Quote	“Because if you are thinking about a linear model of consumption that we find ourselves in, upcycling is essentially a slight deviation, and then that product could end up being bought by a customer who doesn’t really understand the value of it, and it itself could end up being worn twice and thrown in the bin.”
Sub-theme	Guilt
Summary	Converting the way individuals think about consumption is balanced very finely between communicating the right message and going too far, making individuals feel judged and guilty for their behaviour.
Quote	“People don’t want to be made to feel guilty so it’s really difficult."
Sub-theme	Understanding
Summary	Individual's understanding of consumption and waste patterns and sustainable fashion offerings have altered greatly in the last few decades, partly due to the increased availability of information through the internet.
Quote	*“But 15 years ago, 10 years ago, perceptions were very different, and now fair trade is a positive buzz word for a lot of customers."*

Sub-theme	Research
Summary	Several of the designers were also involved with academic research projects, looking into sustainability in the fashion industry. Lizzie Harrison is part of RCA Sustain and the Fashion Ecologies research project.
Sub-theme	Charity
Summary	Arianna Nicoletti is involved with the Stadt Mission charity in Berlin to source textile for upcycling. The charity also has an upcycling brand called Water to Wine.
Sub-theme	Consumer perception of charity shops
Summary	Individual's perception of charity shops as undesirable places to shop is still a problematic area of for those promoting sustainability.
Quote	*"...they said 'Oh no they are awful, I don't like going in them."*
Sub-theme	Giving designers more agency
Summary	Giving designers the agency to make decisions affecting production, labour and materials is key to implementing sustainable production.
Quote	"Giving people the tools to really go down to the factory level and make a difference and to start doing good things where they are designing."

Sub-theme	Highlighting bad practice
Summary	Highlighting and penalising those producing in through unsound practices would strengthen the offerings of sustainable fashion brands, enabling them to compete on price and offer consumers more desirable products.
Quote	“Tax those that don’t act ethically and ecologically to put a financial cost on their hidden abuses, bringing their costs up to the ethically produced garments.”
Sub-theme	Questioning the accusatory stance
Summary	An ideal sustainable fashion situation would be for ethical practice to be the norm, and in which accusation of poor practice would not need to be brought into the spotlight.
Quote	"You have to explain what is wrong about other people's fabrics, and then that gets you into a whole world of finger pointing and negativity which I don’t think is good.”
Sub-theme	New circular economy materials
Summary	Worn Again have been working to create a new closed loop polyester fibre, with greater circularity and a wide range of viable feedstocks.

Creating change in the fashion industry was felt to encompass many aspects, from changing attitudes and behaviours of individuals, to changing design and production techniques and addressing the damage already done. It was made clear by informants that there was no easy solution to the many difficult challenges presented. Leading by example was thought to be one way, in which brands creating sustainable garments would work to change attitudes and behaviours. For citizens, activism and awareness could lead to a move away from the current systems of consumption. Mending was discussed as a method of anti-consumption activism for creating change. Additional approaches included engaging consumers through workshops, education and events, in which individuals could learn to make and alter their own clothes, learn about the various negative impacts affecting the industry and take part in swap events as an alternative to shopping. These activities would enable individuals to understand and value the work which goes into creating garments and the issues connected to production,

and to engage with alternative forms of consumption. These strategies would also work to change the way individuals valued items, with the aim of preventing further disposal of textile into residual household waste.

Risks are presented if consumer understanding for upcycled products does not fully extend to the entire lifecycle of the garment. If upcycled garments are valued in the same way as low cost fashion with a high rate of consumption, there is every danger that they will be disposed of in the same way. Some informants described upcycling as functioning as an end-of-pipe solution, which was only a slight deviation from the linear model of consumption. For a fully functioning circular fashion system to be in place, understanding of the entire lifecycle by all participants is required. Informants also felt that what would not be helpful in changing consumer attitudes were feelings of guilt. Converting the way individuals think about consumption is balanced very finely between communicating the right message and going too far, making individuals feel judged and guilty for their consumption behaviour.

Increased availability of information online has resulted in individuals being more informed than in the past, and it is through these channels of online and social engagement that consumers seem most ready to receive these messages. Using social comparison and peer-to-peer exchange may also provide a platform to engage individuals through more positive messages of social change and clean technologies than in guilt inducing judgements of previous behaviour, as well as offering fresh opportunities for individuals to make the right decisions going forward. Additional actions taken by informants to create change in the industry include involvement in academic research projects looking into sustainability in the fashion industry, and involvement with upcycling projects with local charities. Informants also felt that further actions could be taken by larger brands and governments to create change, by giving designers more agency to implement good practice along the supply chain, and government penalties for bad practice to highlight those acting most irresponsibly.

New circular economy materials also present opportunities to create change in the supply chain. Worn Again have been working on a circular process that aims to recapture polyester and cellulose from pure and blended textiles and are in the process of scaling up the technology. The feedstock for the process will be consumer end-of life-textiles. These textiles will supply a process with greater circularity than previously developed chemically recycled polyester due to the wide range of viable feedstocks. The process, which will produce PET chips and cellulosic outputs that could be re-spun into like new fibres, is competitive on price and the finished product will be equal in quality to virgin material. With vast quantities of PET currently in circulation and high demand for fashion products ongoing, creating implicit sustainability through the wider use and collection of repeatedly recyclable materials will work

to create change by closing the values-action gap created when consumers fail to follow up on expressed good intentions through more conscientious consumption. To fully model the business proposition offered by such technology, it will be necessary to investigate consumer attitudes towards the disposal of clothing and textiles and how these items are valued, in order to locate and source all available feedstocks. It will also be necessary to analyse consumer acceptance of clothing with recycled or 'circular' fibre content, and how this relates to a new business model that aims to shift perceptions and create greater circularity.

5.3 Discussion and Analysis

Informants currently practising within the scope of circular economy fashion at the time of this research ranged from fashion upcyclers, sustainable fashion brands, charity retailers and social enterprises. This also included those leading and informing research, opinion and strategic business decisions in the industry and in education. Brands and businesses were small to medium sized, and had a focus on offering well designed and responsibly made products to conscientious fashion consumers. Social media and in-store dialogue, for those with their own retail premises, were the main strategies cited in communicating sustainable fashion offerings to consumers. Strategies were in place to source sustainably, utilise low impact manufacture and to create desirable products. However many brands remained niche and struggled to compete at larger scale, due to a lack of resources and market knowledge. Informants identified the sustainable strategies they currently utilised as part of a circular economy fashion system as well as the barriers to the successful scaling up and integration of upcycled and sustainable fashion to a level competitive with mainstream fashion offerings. Opportunities to optimise the system were presented in collaborating with larger organisations and academic institutions, in order to access the market intelligence and strategic planning resources required to operate at a larger scale.

5.3.1 Sustainable Strategies

The Design Brief

Informants explained how the design brief stage was the key opportunity to build in sustainable strategies such as the use of environmentally benign, reused or recycled materials into the whole design and production schedule, by setting the task of answering the question of how to produce sustainably, with the use phase in mind. As outlined by Gwilt (2013), a conventional design brief is one which meets the needs and requirements of an identified, collective consumer or market. For circular economy fashion, the design brief should establish common

goals for the design team and adopt a systems based approach which takes into account material savings, provenance, impact, user behaviour and end-of-life considerations (Lockton et al., 2010; Blizzard and Klotz, 2012; RSA Action Research Centre, 2013; Ellen MacArthur Foundation, 2016; The Great Recovery Project, 2016). As emphasised by Luttropp and Lagerstedt (2006), this stage represents the most important point in product development, as demands and specifications are decided for the product that is being planned. As specifications define the goal of the product development process, decisions for ethical and environmentally driven steering can be made during this phase of design (Luttropp and Lagerstedt, 2006).

A Design-led Approach

Informants agreed that that appealing to consumers through the design and style of garments, rather than the ethics of production was the most successful approach. Informants expressed that establishing attractive designs would enable sales, followed by consumer understanding of the terms, care practices and provenance related to sustainable fashion offerings and that this in turn would add to the confidence of customers in making further purchases. While it is undoubtedly important to lead a circular economy fashion strategy with a compelling design-led approach and a strong style identity, this alone does not appear to be a strategy which has allowed brands to compete at scale. To date there is a lack of evidence of upcyclers and sustainable fashion designers scaling up operations to a level able to compete with UK high street retailers. As noted by Sinha et al. (2016), although there has been some success in the mass market retailing of remanufactured fashion, difficulties due to low sales volumes, higher prices than those demanded by high street retail markets and a lack of effective marketing strategies have prevented remanufactured fashion in meeting the required scale, speed and quality demanded by the mass market.

Materials Sourcing

Following on from the design brief stage, materials sourcing for upcycled design took place near to the beginning of the process, making best use of what materials were available at the time, and allowing this to inform and complement the whole design and production process. Similarly, in a study into fashion remanufacturing, Dissanayake and Sinha (2015) noted that the collection of source materials such as clothing and surplus textiles occurred at the starting point of the product development process. The feedback received from designers interviewed as part of the circular economy fashion case studies revealed that sourcing for upcycled fashion design ran continuously throughout the year, firstly informed by research and then feeding into creative research and the design process, followed by sourcing in greater volume once orders from buyers were placed and production was planned. A process of continuous

sourcing and feedback loops at each stage in upcycled design also necessitated research time to be built into the design and production schedule, in order for designers to locate and predict the waste textiles which could be used. Sourcing research differentiated upcycled fashion design from traditional fashion. Fabric sourcing research encompassed a major part of upcycled fashion business activities, and fed into the loop of continuous sourcing. As established by Dissanayake and Sinha (2015), designers working in fashion remanufacturing are inspired by the fabric and source materials to generate initial design ideas. Indeed, decisions made on fabric sourcing affected all following stages of design and production for upcyclers.

Slow Fashion

Informants working in sustainable fashion design reported departing from the traditional dictates of the fashion season schedule, in which several new collections a year are produced then deemed out of date by the next collection. In contrast to this, a trans-seasonal slow fashion approach was adopted in which enduring and regularly available pieces, were gradually adapted and changed over time according to material supply, current fashion and updated style preferences. In this way, key collection pieces and design styles which had come to characterise brands and designers were able to remain as regular retail offerings, with subtle style evolutions administered over time. As noted by Pookulangara and Shephard (2013), slow fashion is about slowing down product lifecycles, creating garments which will not be unfashionable after one season. Alongside the gradual evolution of styles, designers utilised additional slow fashion principles such as small scale production and locally sourced materials (Fletcher, 2013), in a move away from mass produced and low cost value fashion.

'Patchwork' Pattern Cutting Style

As a circular economy fashion strategy, upcycled design is characterised by a unique aesthetic. Designs utilise the same traditional and creative processes as in regular fashion design, such as moodboards, toiles and design research and inspiration, however a flexible design formula in upcycling allows for fabric substitutions to take into account the changeable nature of material supply. This in turn often results in panelling and a structured 'patchwork' style of pattern cutting to make best use of scarce resources. Designs are often made in short runs or as one of a kind pieces due to the limited and changeable nature of supply. The unique and limited edition aspect of upcycled designs were reported to create extra appeal for Antiform's customers; however several informants expressed the opinion that to the vast majority of fashion consumers, the same stigma which applies to second-hand clothing also applies to clothes made from second-hand materials. Informants called for more reliable research on mainstream consumers' perceptions on upcycled fashion.

Modular Manufacturing

The production technique found to be most commonly used by upcyclers was to cut and bundle by individual / whole garments, with pattern pieces cut from a variety of different fabrics, then bundled together into individual garment bags, to be sewn by one maker or machinist, in order to keep the right fabric combinations together. Dadigamuwage (2012) concludes that this style of modular production is the 'most suitable system for fashion remanufacturing, given the high degree of style changes.' Carr and Latham (1994) outline the modular manufacturing process, in which each multi-skilled operator performs several operations in the sequence of constructing a single garment; completing a piece or passing it to another operator before returning to start the process over again. Small groups of highly cross-trained operators are organised into modules with a high degree of autonomy to make decisions (Senanayake, 2004). Operators often perform more than one process, and have access to several machines and the cutting table (Cassidy and Han, 2013).

Resource Efficient Production

Modular production also relates directly to the flexible design formula in upcycling of simple, classic panelled styles, in which sections and panels can be substituted for different fabric combinations depending on supply. As established by Han et al. (2016), for upcycled production, pattern pieces are often cut directly from discarded clothes and irregularly shaped fabric pieces, requiring increased flexibility than in standard production, as minor adjustments may be required at the cutting or construction stages to create garments of a standard size. This style of 'patchwork' pattern cutting also gives upcycled fashion its unique and distinctive aesthetic, however issues of time, efficiency and labour intensity are linked directly to the technique. When discussing the patchwork techniques used in her first upcycled collection from post-consumer textiles, Aus (2011) recalls feedback received from retailers who refused to stock pieces at high prices due to their labour intensive production. More success was found several years later, in which a collection made with post-production textiles allowed for more technical and tailored patchwork techniques to be used at the pattern cutting stage. Of this collection Aus (2011) states: 'The collection is reproducible, the garments are lighter, and they sit better on the body.' Structured panelled styles were in evidence in collections from Goodone, From Somewhere, Antiform, TRAIDremade and FARA Workshop, showing how this technique has been utilised to cut efficiently from scarce and irregularly shaped materials, as shown in Figure 39, Figure 40 and Figure 41.

Figure 39. Goodone and From Somewhere

(www.goodone.co.uk, 2013; www.fromsomewhere.co.uk, 2015)

Figure 40. Antiform and Aluc

(upcycling-fashion.com, 2015; www.antiformonline.co.uk, 2015)

Figure 41. Reet Aus

(Aus, 2011)

5.3.2 Barriers Identified

Mainstream Brands are Not Giving Designers Options

Barriers to the wider integration of circular economy principles in the mainstream fashion industry were felt to be industry reticence to use sustainable techniques and give designers the agency to make sustainable and ethical decisions. For designers within mainstream fashion, restricted involvement outside research, design and sample production limits their ability to consider, request or implement sustainability criteria (Han et al., 2016). As noted by Sinha (2002), the involvement of designers in manual processes such as sample making was inversely proportionate to the size of the fashion company. This is further supported by Han et al. (2016) in which findings indicate the high street designer's role within a large company entails no further involvement beyond designing garments and overseeing sample stages. Gwilt and Rissanen (2011) also noted that in mass production, the fashion designer is involved at research and concept points only, without influence on developments outside of these stages. In contrast to this Sinha et al. (2016) established that designers working in remanufactured fashion have a greater degree of authority over design and style decisions. Additionally, Han et al. (2016) show that designers within fashion upcycling businesses take on highly centralised roles, to directly oversee or actively perform all duties from sourcing,

design and production, through to promotion and retail. Consequently, a challenge is presented for designers to 'explore new avenues in sustainable fashion design by superseding the rules in the conventional fashion design process' (Sinha et al., 2016).

Labour Intensive Upcycled Production

Findings indicate that labour intensive production methods also presented a barrier to scaling up manufacturing. Production processes in upcycled fashion are characterised by their labour intensity, in which items often need to be repaired, unpicked, reworked, re-cut and panelled. As described by Sinha et al. (2016) and Dunn (2008), this can also include sorting, cleaning, disassembly and unpicking of source materials, which results in increased operational costs to reflect the additional time, space and skilled labour required to sort, grade, disassemble and redesign. One-off or short-run designs require the creation of a pattern for each individual design, further adding to time and labour intensity (Dadigamuwage, 2012). This adds to the final cost to the consumer, limiting sales and resulting in brands remaining small and niche. Effective management of upcycled production as a circular economy fashion manufacturing strategy could however take advantage of the labour intensive nature of remanufactured garment production. The provision of localised jobs and training could provide an economic and skills focused boost to a declining area of the apparel sector.

Identifying the Retail Strategy

Further barriers to the wider adoption and distribution of circular economy fashion are presented when identifying the most appropriate retail strategy. Through their own experiences, informants discovered the difficulties of selling relatively high priced upcycled garments in charity shops. Consumers would often be seeking low cost garments, and would not be prepared to buy the more expensive upcycled design items. A more successful strategy was felt to be a dedicated upcycling and sustainable fashion shop which presented the opportunity to communicate directly with consumers. However, such boutiques do not operate at the scale and distribution of UK high street chains. For circular economy fashion offerings to be sold at the scale and volume of the UK high street stores, retailer buyers would have to be prepared to take a significant risk in having non-standard fashion items in store at a higher price (Dissanayake and Sinha, 2015). For the brands and designers themselves to open their own retail premises requires a significant and frequent expenditure, which puts their business at a serious financial risk. From Somewhere, FARA Workshop, Here Today Here Tomorrow and Antiform all made the decision to close their retail premises during the time of this study, soon to be followed by Upcycling Fashion Store which also plans to close its doors in 2017. The cost overheads required to run a bricks and mortar shop are too high, and it is not a

financially viable option for small enterprises selling niche designer goods. This presents a further significant barrier to circular economy fashion.

Lack of Resources for Promotional Activities

Barriers to the effective communication of circular economy fashion to mainstream fashion consumers include a lack of resources to assign to the dedicated promotion, press and public relations of sustainable fashion offerings. Similarly, Sinha et al. (2016) found a lack of finances for promotion and advertising to be a notable weakness for those creating remanufactured fashion, leaving potential customers unaware of the range on offer. Moreover, this was often amplified by a lack of market knowledge on consumers and retail strategy. Lacking the resources to access the most appropriate market research impaired the ability of brands to best identify how to successfully communicate sustainable fashion benefits to consumers, in order to create an understanding of conscientious consumption and to close the 'values-action gap' identified by both literature (Young et al., 2010; Goworek et al., 2012) and through their own experiences. In attempting to effect meaningful change in consumer behaviour through a better understanding of sustainability; brands face further challenges in doing so without inducing feelings of guilt in consumers regarding consumption. Guilt or buyers' remorse as described by Watson (2013), may present differing challenges to brands dependent on their chosen target market. For consumers making mainstream, high-street purchases, guilt is assuaged by making low cost purchases which do not represent wasted funds if not worn regularly or at all. For those looking for more sustainable offerings, keeping better quality clothes for longer and wearing items regularly helps conscientious consumers to avoid remorse (Watson, 2013). Brands and designers aiming to communicate a range to their target market face a challenge not only in dedicating enough resources to identify and understand their audience, but to offer them products at the most appropriate price, quality and style to meet their preferences.

The Mainstream Media and Consumer Understanding

Barriers to the promotion of circular economy fashion strategies in the mainstream media were felt to include a lack of appropriate coverage, acceptance and integration by the mainstream fashion press. Sustainability principles at the heart of circularity are directly at odds with the promotion of a fashion system driven by trends and constant newness. Consumers can become convinced to purchase new products by trends in the current system, whereas sustainable fashion emphasises a move away from the constant consumer fashion appetite as described by Sharma and Hall (2010). For informants this dichotomy and lack of provision was characterised by a mainstream media tendency to single sustainable fashion out as a novelty rather than to integrate it as the norm, with resulting uncertainty expressed by brands

and designers of how consumers understood sustainable or ethical fashion. Further barriers were presented by consumer understanding of the terms and language often used in discussing sustainable fashion. In a study into UK fashion shopper's understanding of ethical fashion terms, Blanco-Velo et al. (2010) confirmed findings by Berry and McEachern (2006) and Thomas (2008) that although consumers are presented with sufficient information through the media, there is a lack of understanding of the terms used, which are often overly complex and inaccessible, with multiple definitions. Inappropriate delivery and confusion over terms results in an ineffective message which not only requires integration to the mainstream media and fashion industry, but into a broader cultural context, in order to be properly understood (Blanco-Velo et al., 2010). As the consumer interprets the message as it is received, it is imperative that the meaning attached to marketing communications by brands and designers aligns with the way it is then understood by the consumer, and that the brands and designers in turn understand the resulting consumer perceptions in this continuous feedback loop of information.

5.3.3 Opportunities to Optimise the System

Modular Manufacturing

Efforts to scale up production and take advantage of economies of scale need to be backed up by initial finance and a secure market, both uncertain factors for small niche brands. As noted by Dissanayake and Sinha (2015b) the commercial success of remanufactured fashion is highly dependent on efficient production and consistent quality levels. In order to maintain efficiencies and quality levels in circular economy fashion strategies, such as upcycling and remanufacture, the system of modular manufacturing holds certain advantages over more traditional cut and make systems, such as greater flexibility and autonomy, improving skill levels and job satisfaction amongst operators (Han et al., 2016). In a modular manufacturing system, maintaining the required quality level at each stage in the production line is the responsibility of the operator (Senanayake, 2004), thereby reducing the time and labour requirement for final quality checks (Dadigamuwage, 2012). Operators are required to be cross trained and multi-skilled, with an understanding of how different fabric types, pattern placement and cutting will impact on the finished design (Senanayake, 2004; Sinha et al., 2016). These represent new skills that need to be included as part of the education and training of a circular economy fashion designer, in preparation for new roles in the industry for design skills for manufacturing (Sinha et al., 2016). Utilising labour intensive production guided by ethical and fair trade principles could provide employment where it is needed, sharing the benefits of trade with the largest number of people (Minney, 2011).

Online Retail and Promotion

Due to the high cost of running a bricks and mortar retail premises, brands and designers have instead focused on retailing sustainable and upcycled garments online, through their own websites and through online boutiques such as Gather & See and Not Just a Label. Although a viable and cost-effective retail solution for circular economy fashion, compelling and targeted promotional strategies are critical for the success of online retail, backed up clear information regarding the ethics and traceability of products. Online promotion offers brands and designers the opportunity to engage with customers, develop relationships and gather feedback (Han et al., 2016; Sinha et al., 2016). In a report by Mintel (2016) on online retail it was found that 81% of consumers had visited a social media site in the past three months, with 49% of these social media users visiting a brand's page via social media, and a further 25% expressing an intention to do so in the future. By encouraging consumers to repost brand messages and upload their own photos of products and looks using a specific sharing hashtag, brands are engaging consumers through the co-creation of content and benefiting from peer-to-peer endorsement. This strategy targets individuals behaving as fashion leaders and early adopters (Rogers, 2003; Kim and Hong, 2011) to build confidence in those following on social media through social comparison and opinion sharing behaviours. This approach results in cognitive satisfaction with products purchased and hedonic associations with the online shopping experience (Kang and Park-Poaps, 2011; Kim and Hong, 2011). Utilising effective emotional and psychological motivators to direct consumer behaviour towards more conscientious consumption may prove a powerful strategy for designers and brands struggling at the sidelines. Upcycled fashion brands have a history of demonstrating highly engaged consumer relationships, offering events which engage consumers in the ethos and lifestyle of sustainable fashion (Han et al., 2016). Continuing this engagement online through e-commerce and targeted social media content may allow these businesses to effect significant behaviour change.

Communication Strategy

Current understanding in the business practices of sustainable and circular economy fashion brands points towards a communication strategy built around emphasising the design, style and aesthetics of products, without leaning too heavily on the provenance and ethical credentials of supply chains, or holding in mind a clear target audience. Products must certainly be compelling and design-led to compete with the mainstream, however the under-pinning consumer research and strategic considerations must also be included in business activities to ensure effective communication of a brands ethos, values and message in a way with connects with the target audience. It is clear that circular economy fashion communication

strategies would benefit from further research into how to identify target consumers, and profile current patrons, in order to determine strategies to close the ‘values-action gap’. Small and micro enterprises are often limited in their resources to carry out vital research which would under-pin all business and communication activities; however collaborations with academic research partners with shared sustainability goals offer greater scope for developing the pool of knowledge available. Key areas for further inquiry include identifying how to integrate sustainable fashion into the mainstream media and garment industry to reach a wider market and make best practice more commonplace.

6. Consumer Survey

6.1 Online Questionnaire Findings

This section summarises the findings and analysis from the consumer survey, carried out to meet Aim 3 of the research; to identify consumer purchase and divestment attitudes and behaviours, and establish what preconceptions may exist amongst consumers, regarding sustainable fashion products. The results and analysis of the survey also relate expressly to Aims 4 and 5 of the research, by establishing the consumer perspectives necessary to create effective circular economy fashion communication and business strategies. The survey data was collected through online snowball sampling through social media from June to October 2015. A total of 353 complete responses out of 630 who had started the self-administered online survey were received. Data collected was from female fashion consumers, as this study primarily focuses on women as the main consumers of fashion. A total of 30 questions collected answers for 151 variables.

Questions throughout the survey can be grouped together under the following themes for analysis:

- Demographic information
- Garment use and divestment phase
- Fashion influences and sources of information
- Fashion shopping behaviour
- Outlook on fashion consumption and ethics

Survey respondents could answer questions in a number of ways. Multiple choice questions gave respondents the option to select either as many options as were applicable to them (as in questions 2, 12, 13, 18 and 19), or select the most applicable response from a Likert scale of agreement with the statement made (as in questions, 5, 6, 7, 8, 10, 11, 16, 17 and 20), or select the one response which was the most appropriate for them, as in the demographic questions (1, 22, 23, 24, 25, 26, 27, 28, 29 and 30) and questions 4, 9, 14 and 15. In question 21 respondents were asked to rank each groups of fashion stakeholders in order of responsibility. Likert scale questions used a scale of agreement ranking from 1= ‘Never’ to 5=’Always’.

6.2 Demographic Information

Questions 22 to 30 gathered personal data on demographic information, used to categorise respondents. Question 1 “Are you male or female?” was included as an immediate disqualifier, as the study concerned female shoppers with the survey titled ‘Women’s Fashion’. All those answering question 1 as ‘Male’ (a total of 29 out of 630) were immediately disqualified from the survey and thanked for their time. The demographic statistics of the survey are presented in Section 10.5.2 of Appendix E in Tables 23 and 24, on pages 415 and 416.

Of the participants responding to the survey, it can be seen that there was a broad spread over a diverse range of demographic categories in all ages, countries and stages of life. 40.5% of were aged between 25 to 34 (n=143) years of age, 19.8% (n=70) were 18 to 24 years of age, 16.1% (57) were aged between 35 to 44. 43.9% had been educated to post-graduate level (n=155) and 35.7% (126) were university graduates. 87.8% were living in the UK (n=310), and 38.8% were in full time employment (n=137). 17.8 % were employed in education (n=63), 14.7% in creative arts and design (n=52), and 19% were students (n=67). 32% of respondents were also single (n=113), although a high proportion, 28.6%, were also married (n=101) or cohabiting (22.1%, n=78). The majority, 76.5%, did not have any children under 18 living at home with them (n=270).

22.1% of household incomes were between £30,000 to £50,000 per year (n=78), although there were also sizeable proportions of respondents with a household income above and below this, tailing off towards the higher income band of £100,000 per year and upwards. Preliminary analysis using Spearman’s rho shows that there is a moderate, positive relationship between age and income, $r_s=0.287$, n=348, $p<0.001$.

6.3 Garment Use and Divestment

Questions 9 to 15 gathered data on the garment use phase and divestment behaviours of consumers, such as dealing with unwanted or damaged clothing through swapping, selling, donating, mending or throwing away.

6.3.1 Clothes Swaps

Question 9 surveyed respondents on their attendance at clothes swaps. Results on clothes swap attendance are shown in Table 48 of Section 10.5.5 of Appendix E on page 479. The majority of responses were positive, with 41% (n=145) of respondents saying that although they had not been to a swap before would like to and 20% (n=72) saying that they had attended a clothes swap and would return.

6.3.2 Demographic Variables and Clothes Swaps

In Tables 49 to 54 of Section 10.5.5.1 of Appendix E (page 480 to 484) it can be seen that relatively high proportions of those in the 18 to 24 (50%, n=35), 25 to 34 (40.6%, n=58) and 35 to 44 (45.6%, n=26) age groups were still keen to attend a clothes swap, despite never having attended one before. 30.1% (n=43) of those in the 25 to 34 age group also answered that they had been to a clothes swap and would return. Although not statistically significant, it can be seen that the majority of those had attended clothes swaps and were keen to return were university graduates (26.2%, n=33) or post-graduates (21.9%, n=34), and that those keen to attend a clothes swap, despite never having attended before were well represented in each education level. Household income levels do not seem to greatly affect attendance or interest in clothes swaps, with those in low income and middle income brackets expressing interest or attendance, although interest does drops off towards the two highest income brackets. Employment status, relationship status and having young children at home or not also do not seem to greatly affect attendance or interest in clothes swaps. Belonging to certain categories within each of these demographic variables does not significantly affect a preference for clothes swap attendance. The majority of respondents in all categories expressed positive reactions towards swaps, with preferences to return or attend for the first time.

6.3.3 Demographic Variables and Garment Use and Divestment Behaviours

Questions 10 and 11 gathered data on clothing divestment behaviours and results are presented in Tables 55 to 61 of Section 10.5.5.2 of Appendix E (pages 485 to 489).

6.3.4 Age and Garment Use and Divestment

Significant differences were revealed between age groups 25 to 34 and 55 to 64 ($p<0.05$) in allowing clothes to remain broken or worn out. Those in the older age group were less likely to leave clothes in a state of disrepair without taking action in some way. This may be due to differences in available time, skills, resources and inclination to mend, maintain or replace items.

Regarding donating unwanted clothes using a textile bank, significant differences were indicated between the 18 to 24 and 35 to 44 age groups ($p<0.05$). The youngest age group is least likely to donate clothes they didn't want any more using a textile bank.

In terms of clothes swaps, significant differences were revealed between the 25 to 34 and 55 to 64 age groups ($p<0.01$), indicating that those in the 55 to 64 age group were the least likely to exchange clothes they had finished with at a clothes swap.

6.3.5 Household Income Level and Garment Use and Divestment

Significant differences were revealed between the under £10,000 p.a. and £70,000 to £100,000 p.a. income brackets ($p<0.05$) and £10,000 to £20,000 and £70,000 to £100,000 p.a. income brackets ($p<0.05$) regarding customising, mending or altering clothes that respondents were bored of, did not fit or did not like anymore. Those in the higher income bracket were less likely to customise, mend or alter their own clothes themselves than the two lower income groups.

6.3.6 Garment Divestment Behaviour

Question 12 surveyed respondents on their actions to deal with clothes which were worn out, they were bored of or did not fit anymore, and socks and underwear which were worn out. Results are shown in Table 61 of Section 10.5.5.2 of Appendix E (page 489). The majority of survey respondents dealt with worn out clothes by recycling them at home as rags (28.6%, n=101) or taking them to a recycling bank (27.5%, n=97), however a large proportion of 26.3% (n=93) threw these items away into the bin. For clothes which respondents were simply bored of, the main method of divestment was to give them to a charity shop (50.1%, n=177), although many stored them (14.2%, n=50), gave them to friends or family (12.5%, n=44) or sold them online (11%, n=39). Similarly for clothes that did not fit anymore, respondents mainly gave them to a charity shop (48.7%, n=172), although many also stored them (15.3%, n=54), gave them to friends and family (14.2%, n=50) or sold them online (10.2%, n=36). For socks and underwear that were worn out, 70.3% of respondents threw these into the bin, with much lower

proportions placing them in recycling banks (12.2%, n=43) or recycling them at home into rags (11.6%, n=41).

6.3.7 Demographic Variables and Garment Divestment Behaviour

Results shown in Table 62 of Section 10.5.5.3 of Appendix E (page 491) demonstrate the relationship between age and ways to deal with worn out clothes. Respondents in the two youngest age groups of 18 to 24 (31.9%, n=22) and 25 to 34 (31.5%, n=45) were the most likely to put worn out clothing in the bin, followed by recycling banks and recycling at home. All four of the older age groups were most likely to recycle worn out clothing at home into rags or dusters, followed by taking them to a recycling bank or putting them in the bin. For relationship status and ways to deal with worn out clothes, those who were married (31.7%, n=32) or single (30.1%, n=34) were most likely to put worn out clothing in a recycling bank, whereas other relationship status groups, such as those cohabiting (37.7%, n=29), were more likely to recycle worn out clothes at home. For education level and dealing with clothes that did not fit anymore, all respondents at every level were most likely to donate unsuitable fit items to a charity shop, however for university graduates (15.2%, n=19), the next most likely course of action was to sell these items online. For other education levels, storage or passing on to friends and family were the next most likely courses of action.

Additional results without statistical significance but with potentially meaningful implications for circular economy fashion were found in education level and children at home in relation to ways to deal with worn out clothing. For education level, university post-graduates (36.1%, n=56) were most likely to recycle worn out clothes at home. Those who were sixth form college educated (34.5%, n=19) and university graduates (31.2%, n=39) were most likely to use a recycling bank, and those who were educated to secondary school level (29.4%, n=5) were most likely to take worn out clothes to a charity shop. Respondents with children at home (32.9%, n=26) were most likely to use a recycling bank, and those without children at home (27.9%, n=75) were most likely to recycle at home.

For demographic variables and wardrobe items with lost appeal, of which respondents were bored, all categories in each demographic variable reflected the overall frequencies showing that items were mostly given to a charity shop, followed by storage, then giving away to friends or family or selling online. This was mostly also true for wardrobe items that did not fit respondents, in all categories for each demographic variable. Most common divestment first took the form of donation to a charity shop, followed by storage, then passing on to friends and family, followed by selling online for almost all groups apart from university graduates who favoured selling online more than other groups. For socks and underwear that were worn out,

once again within category results reflected overall frequencies showing that the vast majority of all respondents threw these into the bin.

6.3.8 Discarded Clothes and Textiles

Question 13 made further inquiries into the reasons why clothing and textiles ended up in the bin. Frequency results are shown in Table 85 of Section 10.5.5.3 of Appendix E (page 513). Respondents were able to select as many reasons as were applicable. Nearly 60% of respondents felt that clothes that ended up in the bin did so because they were too worn or dirty to be recycled (59.6%, n=210), and nearly 40% also felt that these items ended up in the bin because they would not be worth anything in a charity shop (38.5%, n=136).

6.3.9 Demographic Variables and Discarded Clothes and Textiles

Tables 62 to 82 of Section 10.5.5.3 of Appendix E (page 490 to 513) demonstrate the relationship between demographic variables and discarding clothes and textiles. Education level and throwing clothes in the bin because they were thought to be too worn or dirty to be recycled showed a significant relationship at the $p<0.01$ level. 66.7% (n=84) of university graduates responding to the survey chose this as the main reason their clothes and textiles ended up in the bin, as did 65.5% (n=36) of sixth form educated respondents and 54.8% (n=85) of post-graduates.

There was a relationship between employment status and binning clothes as it is the easiest option at the $p<0.05$ level of significance. 20.3% (n=13) of those in education or training selected this reason, as did 18% (n=25) of those working full time and 14.8% (n=9) of those working part time. There is also relationship between employment status and binning clothes due to lack of knowledge at the $p<0.05$ level. 23.4% (n=15) of those in education or training selected this reason, as well as 19% (n=26) of those working full time. Although these were not the most common reasons for binning clothes it is indicative of a significant proportion of the population for whom the convenience of simply binning unwanted items takes precedence over other considerations, perhaps due to a lack of time or information available.

For children at home and never throwing clothes in the bin, a relationship exists at the $p<0.05$ significance level. 25.3% (n=20) of those with young children at home selected this statement, and although not the most frequent statement within the demographic, the proportion of those who chose this may indicate a section of the population who are keen to set a good example to their children.

6.3.10 Donated Clothes and Textiles

Convenience

Questions 14 and 15 dealt with the convenience of donating clothes responsibly, either to a charity shop or by taking them to a textile bank. Respondents were surveyed on the time taken to complete this task and whether it was convenient to them. Results are shown in Table 92 of Section 10.5.5.3 of Appendix E (page 519). A Spearman's rho analysis demonstrated a clear and statistically significant correlation between the length of time taken to donate clothing and convenience of r_s=0.493 ($p<0.001$), indicating that the longer it took to reach a destination where clothing could be donated, the less likely it was that this would be convenient.

This is also apparent from the highly statistically significant ($p<0.001$) crosstabulation shown in Table 93 of Section 10.5.5.3 of Appendix E (page 520), in which it can be seen that the percentage of those finding donating convenient is higher the less time was taken to donate. The most convenient time is 2 minutes, with 97.9% (n=46) of donators finding this agreeable, however the most common time taken for clothing donations is 10 minutes, still with 91% (n=193) of donators finding this convenient. For those not finding donating convenient and spending over 30 minutes (47.1%, n=32) or 40 minutes (57.1%, n=4) to reach a donating destination, creating closer and easier to reach points of textile collection may increase the amount of textiles which could potentially be collected.

6.4 Fashion Influences and Information

Questions 8 and 16 to 19 gathered data on what influenced consumers regarding fashion and trends, what their own personal views of themselves were and where they received information which influenced their behaviours, attitudes and views on fashion, style and garment use. Questions 8, 16 and 17 in particular dealt with respondents views of their own personal style and self-image. Questions 18 and 19 surveyed respondents on where they found information on clothes, fashion, shopping and what to do with their old clothes.

6.4.1 Personal Style Statements and Demographic Variables

Respondents selected Likert scale responses to indicate their level of agreement with statements made in questions 8, 16 and 17.

6.4.2 Age and Personal Style Statements

Results are presented in Tables 106 and 107 of Section 10.5.6.1 of Appendix E (page 554 to 555). Significant differences were revealed between age groups regarding personal style and self-image. Regarding shopping for leisure, significant differences were indicated between the 18 to 24 age group and both the 35 to 44 ($p<0.001$) and 55 to 64 ($p<0.01$) age groups; and the 25 to 34 and 35 to 44 ($p<0.01$) age groups. This suggests that the two youngest age groups viewed themselves as being more inclined to shop for leisure, perhaps with older groups having less time and increasingly more commitments elsewhere. The youngest age group also viewed themselves as being more likely to enjoy browsing in shops as the differences between the 18 to 24 age groups and both the 25 to 34 ($p<0.05$) and 35 to 44 ($p<0.001$) age groups reveal.

Regarding keeping up with the latest trends, significant differences were revealed between the 18 to 24 age group and each of the 25 to 34 ($p<0.05$), 45 to 54 ($p<0.01$) and 55 to 64 ($p<.0.01$) age groups, suggesting that the youngest age group is also more trend focused. Significant differences were also revealed between the 25 to 34 age groups and both the 35 to 44 ($p<0.05$) and 55 to 64 ($p<0.05$) age groups regarding fitting in with the style of friends. Although all age groups scored low in response to style choices based on peers, mean differences reveal that the 55 to 64 age group were the least concerned about fitting in with the style of their friends.

Significant differences were also revealed between the 18 to 24 and 35 to 44 age group ($p<0.05$) in relation to style ideas from magazines and websites. This suggests that the 35 to 44 age group is the least concerned with the coverage of style and trends in the mainstream fashion media. Similarly, significant differences between the 18 to 24 and 35 to 44 age group

($p<0.05$) in relation to advertising indicate that the 35 to 44 age group is most deterred by advertising, again suggesting that this age groups is the least attentive to messages from mainstream media.

Concerning the importance of style and trend, significant differences were revealed between the 18 to 24 age groups and each of the next four older age groups of 25 to 34 ($p<0.01$); 35 to 44 ($p<0.05$); 45 to54 ($p<0.05$) and 55 to 64 ($p<0.05$), indicating that it is the youngest age group for whom being stylish and on trend is most important to, with importance diminishing with age.

In relation to whether respondents saw themselves as fashionable, significant differences were indicated between the 18 to 24 age groups and each of the next four older age groups of 25 to 34 ($p<0.001$); 35 to 44 ($p<0.01$); 45 to54 ($p<0.05$) and 55 to 64 ($p<0.05$), suggesting that for the youngest age group, self-image is more strongly related to being fashionable than each of the older age groups. Being stylish is also significantly more a part of self-image for the youngest age group as revealed by differences between the 18 to 24 and 25 to 34 age group at the $p<0.05$ level.

In connection with seeing oneself as impressionable, significant differences were revealed between the 18 to 24 age group and each of the 35 to 44 ($p<0.001$), 45 to 54 ($p<0.001$) and 55 to 64 ($p<0.001$) age groups, and the 25 to 34 and 55 to 64 age groups ($p<0.05$) This signifies that the two youngest age groups, and in particular the youngest group, see themselves as more impressionable than the older age groups do.

Significant differences were again revealed between the 18 to 24 age groups and each of the next four older age groups of 25 to 34 ($p<0.01$); 35 to 44 ($p<0.01$); 45 to54 ($p<0.001$) and 55 to 64 ($p<0.001$) in relation to describing oneself as on trend, suggesting that trend is a more important part of self-image for the youngest age group.

6.4.3 Education Level and Personal Style Statements

Results are presented in Tables 108 and 109 of Section 10.5.6.1 of Appendix E (page 556). In connection to education levels and personal style and self-image, significant differences were revealed between university post-graduates, graduates and the sixth form college educated, but not the secondary school educated.

Sixth form educated respondents indicated they were more inclined to want to fit in with others than university graduates ($p<0.05$), although all education level groups scored low on this question. University graduates revealed they were less inclined to want to dress in a smart and business like way than post-graduates ($p<0.01$), and sixth form college educated respondents were more inclined to want to dress in a casual and relaxed way than post-graduates ($p<0.05$).

Regarding self-image, post-graduates were more likely to see themselves as eco-conscious than the sixth form college educated ($p<0.01$), also more likely to see themselves as responsible than university graduates ($p<0.01$), and more likely to see themselves as knowledgeable than graduates ($p<0.05$).

6.4.4 Household Income and Personal Style Statements

Results are presented in Tables 110 and 111 of Section 10.5.6.1 of Appendix E (page 557). With regard to household income levels and personal style and self-image, significant differences were revealed between the two lowest income brackets and income levels above. Those with a household income level below £10,000 p.a. indicated they were less likely to shop impulsively than each of the next five higher household income levels of £10,000 to £20,000 p.a. ($p<0.001$); £20,000 to £30,000 p.a. ($p<0.05$); £30,000 to £50,000 ($p<0.05$); £50,000 to £70,000 p.a. ($p<0.01$) and £70,000 to £100,000 p.a. ($p<0.05$). This indicates that those with the lowest incomes did not see themselves as impulsive shoppers, perhaps preferring to shop around for the best prices before making a decision.

Significant differences were also shown between those in the £10,000 to £20,000 p.a. income bracket and those in the £20,000 to £30,000 p.a. ($p<0.05$) and £50,000 to £70,000 p.a. ($p<0.01$) regarding a preference for dressing in a smart and business like way. This suggests that those in the lower income group had less regard for dressing smartly, perhaps due to their less senior employment levels or younger age. Those in the £10,000 to £20,000 p.a. group were also more likely to favour dressing alternatively than the £50,000 to £70,000 p.a. group ($p<0.05$), and more likely to view themselves as eco-conscious than the £70,000 to £100,000 p.a. group ($p<0.05$). Those in the under £10,000 p.a. household income bracket were more likely to think of themselves as creative than the £70,000 to £100,000 p.a. group.

6.4.5 Sources of Information

Questions 18 and 19 dealt with where respondents found their information on clothes, fashion, shopping and how to deal with old clothes which were not wanted anymore. Respondents picked as many answers as were applicable to them. Results are shown in Table 114 of Section 10.5.6.1 of Appendix E (page 559). The top three sources of information for clothes, fashion and shopping were retailer, brand or fashion websites (n=157), shopping with friends and family (n=156) and social media and blogs (141), suggesting that online sources and peers were most influential. The top three sources of information for how to deal with old clothes were learning from upbringing and home life (n=212), talking with friends and family (n=132) and flyers through the door (n=71). This indicates that respondents main influence on recycling behaviour is learnt at home when growing up, although peer comparison and information availability also play key roles.

A correlation matrix also analysed any possible relationships between sources of information and the demographics of age, education level and household income, as these demographics used responses on a numerical scale. Only one weak negative correlation was found with statistical significance. The relationship found was between age and social media and blogs as a source of fashion information (r_s=-0.317, n=353, p<0.001), indicating that younger respondents favoured social media and blogs as sources of information for clothes, fashion and shopping. Sources of information were also correlated against each other and showed many weak correlations between different sources, indicating that respondents favour a number of types of media and information.

6.4.6 Demographic Variables and Sources of Information

Results shown in Tables 115 to 126 of Section 10.5.6.2 of Appendix E (page 559 to 571) demonstrate the relationship between demographic variable and sources of information. The contingency tables for age and sources of information indicates that there are relationships between age and seeking fashion information from social media and blogs, TV programmes and adverts, talking with friends and family and shopping with friends and family, as well as some categorised as ‘other’ which will be analysed qualitatively at the end of this section on sources of information. There are also relationships between age and seeking information about what to do with old clothes by talking with friends and from the workplace.

There is a relationship between age and using social media and blogs for fashion information at the p<0.001 significance level, which confirms correlation results for age and social media and blogs as a source of fashion information (r_s=-0.317, n=353, p<0.001). Results show that the two youngest age groups of 18 to 24 (58.6%, n=41) and 25 to 34 (48.3%, n=69) favour

social media and blogs more than the older age groups. Relationships have also been shown for the two youngest age groups favouring talking with friends and family as a source of information; 18 to 24 (42.9%, n=30) and 25 to 34 (45.5%, n=65) at the $p<0.001$ level and for the two youngest age groups favouring shopping with friends and family as a source of information; 18 to 24 (60%, n=42) and 25 to 34 (45.5%, n=65) at the $p<0.05$ level, TV also shows a significant relationship with age at the $p<0.05$ level, with the youngest age group favouring this source of information more than other groups (18 to 24, 27.1%, n=19).

When finding out information on what to do with old clothes, a significant relationship was shown at the $p<0.05$ level between age and talking with friends and family, with 48.6% of 18 to 24 year olds respondents (n=34) and 39.2% of 25 to 34 year old respondents (n=56) choosing this method. A significant relationship was also shown between age and finding information out about dealing with old clothes from the workplace, with 17.5% of 25 to 34 year olds (n=25) also selecting this source.

Significant relationships have also been shown between education levels and sources of information on fashion and shopping. For retailer, brand or fashion websites relationships are indicated at the $p<0.05$ level. 54.5% (n=30) of those educated to sixth form college level, 50% (n=63) of university graduates and 38.1% (n=59) of post-graduates favoured these websites as sources of information. Additional online sources of social media and blogs also show significant relationships with education levels. 46.8% (n=59) of graduates and 40.6% (n=63) of post-graduates favour these peer-to-peer online sources of information.

For household income and finding information on how to deal with old clothes from TV programmes and adverts there was a relationship at the $p<0.05$ level. There were low levels of respondents in each income bracket who cited this source of information, indicating that TV is not the way in which consumers expect or seek out such knowledge.

The contingency table for employment status and sources of fashion information indicates that there was a relationship between employment status and TV as a source of fashion information at the $p<0.001$ level of significance. TV once again featured very low as a preferable source of information. Within the information category, those who rated it mostly highly were respondents in full-time employment (16.1%, n=22) and those in education or training (21.9%, n=14), although it was far from the most popular information choice within either employment status category. This once again indicates that TV is not the way in which consumers expect or directly seek out knowledge on fashion and shopping. A significant relationship is also shown at $p<0.001$ level for employment status and magazines and newspapers as a source of information on how to deal with old clothes. These types of print media also featured very low as chosen sources of information for all levels of employment.

Those within the category who rated newspapers and magazines highly as a source of information on how to deal with old clothes were the self-employed respondents (18.4%, n=9), however the low response across all groups indicates that print media is not an effective or preferable way to communicate this sort of information to consumers.

There was a significant indication for the relationship between relationship status and social media and blogs as a source of information on clothes, fashion and shopping at the $p<0.001$ level. 54.9% (n=62) of respondents who described themselves as single chose social media and blogs as their preferred choice of fashion information, as did 39.7% (n=31) of those cohabiting, indicating that these peer-to-peer sources most appeal to those in early or low levels of relationship commitment.

Many respondents also selected 'Other' regarding sources of information for clothes, fashion and shopping and for how to deal with old clothes in questions 18 and 19. The frequency results shown in Tables 127 to 129 of Section 10.5.6.2 of Appendix E (page 572 to 574) shows that within the response of 'Other', the most frequent theme was not seeking the information at all, followed by already having ideas on what to do. Online information was the third most popular.

6.5 Fashion Shopping Behaviour

Questions 2 to 7 gathered data on fashion shopping behaviour from respondents. Questions 2, 3 and 4 surveyed respondents on which types of shops they preferred to shop in, their preferred retailers and how often they shopped for clothes. Questions 5, 6 and 7 asked questions about what respondents were looking for when shopping for clothes and how the experience of shopping made them feel using a Likert scale of agreements to the statements made.

6.5.1 Types of Shop Frequented

Frequency data for types of shop frequented are presented in Table 25 in Section 10.5.4 of Appendix E (page 423). Looking at frequencies for Question 2, the most preferred method of shopping was 'Online' (n=234), closely followed by 'On the high street' (n=220). Also popular were 'Independent shops' (n=179) and 'Charity shops' (n=172).

For Question 2, a correlation matrix was created for each type of shop frequented and the demographics of age, education level and household income as these demographics used responses on a numerical scale. There were only five notable weak correlations between these demographic variables and shopping methods.

- A weak negative correlation between age and high street shopping (r_s=-0.166, n=353, p<0.01), suggesting that older respondents favoured the high street less than younger respondents.

- A weak positive correlation between education level and department store shopping (r_s=0.114, n=353, p<0.05), indicating that those who had progressed further in education preferred to shop at department stores than those who had left education at an earlier stage.

- A weak positive correlation between household income and department store

- shopping (r_s=0.170, n=348, p<0.01), indicating that those with more disposable income also preferred shopping at department stores.

- Weak negative correlations between income and local markets (r_s=-0.204, n=348, p<0.01) and income and charity shops (r_s=-0.116, n=353, p<0.01). This indicates that those with higher household incomes preferred to shop at local markets and in charity shops less than those with lower incomes.

Types of shop frequented were also correlated against each other and although there were many weak correlations between types of shop frequented, this was to be expected as female shoppers are likely to patronise five or more retailers (Sender, 2015). Only one correlation over r_s=0.4 was noted. A positive correlation between shopping at charity shops and vintage shops was shown (r_s=0.424, n=353, p<0.01), indicating that those searching for second hand clothes favoured both charity and vintage outlets.

6.5.2 Demographic Variables and Shopping Behaviours

Contingency tables for demographic variables and shopping behaviours are presented in Tables 26 through to 31 in Section 10.5.4.1 of Appendix E (page 424 to 429). The contingency table for age and type of shop frequented indicates that there is a relationship between age and two of the types of shop at the p<0.05 significance level. These are high street and vintage shops. For high street shopping, it can be seen that 74.3% of survey respondents in the 18 to 24 age group (n=52) favoured shopping on the high street. Sizeable proportions of those in the, 25 to 34 (63.6%, n=91) and 35 to 44 (64.9%, n=37) age groups also frequented high street shops. Vintage shops were most popular with the 25 to 34 (42%, n=60) age group, followed by 45 to 54 (38.1%, n=16) and 18 to 24 (34.3%, n=24). Although only two types of shop showed a statistically significant relationship with age, the most popular shopping method by frequency was online. It can be seen that online shopping is most popular with the 35 to 44 (71.9%, n=41), then 25 to 34 (70.6%, n=101) and 18 to 24 (64.3%, n=45) and 45 to 54 (64.3%, n=27) age groups, although older age groups also show a preference for online shopping. Independent shops, charity shops and department stores were popular across all age groups. Independent shops were most preferred by the 35 to 44 (57.9%, n=33) age group, charity shops most preferred by the 25 to 34 (56.6%, n=81) age group and department stores most preferred by the 35 to 44 (57.9%, n=33) age group.

The contingency table for education level and type of shop frequented indicates that there is a relationship between education level and a preference for independent shops at the p<0.05 significance level. Independent shops were favoured by 54% of university graduates (n=68), followed by 51.6% of post-graduates (n=80) and 50.9% sixth form college educated respondents (n=28). Online shopping appeared to be most popular with university graduates (73%, n=92), then post-graduates (63.9%, n=99), sixth form college educated (63.6%, 35) and last of all secondary school educated (47.1%, n=8). High street shops were most popular with the sixth form college educated (69.1%, n=38), then university graduates (66.7%, n=84), post-graduates (58.1%, n=90) and secondary school educated (47.1%, n=8). Charity shops were most popular with university graduates (55.6%, n=70), then secondary school educated (52.9%, n=9), post-graduates (45.2%, n=70) and sixth form college educated (41.8%, n=23).

Department stores were also most popular with post-graduates (50.3%, n=78), sixth form college educated (41.8%, n=23) and university graduates (37.3%, n=47).

For household income and types of shop frequented there is a relationship at the $p<0.05$ significance level between income and a preference for department stores. Department stores were most popular with those in the higher income brackets over £50,000 p.a. (53.2%, n=25; 65.4%, n=17 and 61.5%, n=8), although still popular with those in the middle and lower income brackets below £50,000 p.a. (44.9%, n=35; 39.7%, n=23; 31.9%, n=22 and 38.6%, n=22). There is also a relationship at the $p<0.01$ significance level between income and shopping at local markets and at designer boutiques. Shopping at local markets was most preferred by those in the lowest income bracket of under £10,000 p.a. (43.9%, n=25), followed by those in the £10,000 to £20,000 p.a. group (27.5%, n=19) and the £30,000 to £50,000 p.a. group (24.4%, n=19). Shopping at local markets was least preferred by those in the £70,000 to £100,000 p.a. group (11.5%, n=3) and the £50,000 to £70,000 p.a. group (12.8%, n=2). For employment status and types of shop frequented, a relationship is shown at the $P<0.001$ significance level between employment status and charity shop patronage. Charity shops appear to be most popular with self-employed respondents (73.5%, n=36).

For relationship status and types of shop frequented, online shopping, local markets and designer boutiques show a relationship at the $P<0.05$ significance level. Online shopping is highly popular amongst almost all relationship status groups, from single (66.4%, n=75) to stable partnerships groups such as married (63.4%, n=64), cohabiting (70.5%, n=55) and civil partnerships (83.3%, n=25).

6.5.3 Retailers Most Frequented

The frequency results for Question 2 in which high street shops (n=220) were the second most frequented shop type after online (n=234) are reflected in the most popular retailers for respondents in Question 3, shown below:

1. H&M	(n=97)
2. Charity shop (unspecified)	(n=68)
3. Primark / Penneys	(n=54)
4. Marks and Spencer	(n=53)
5. Topshop	(n=47)
6. New Look	(n=43)
7. ASOS	(n=43)
8. Zara	(n=41)
9. Next	(n=27)
10. Asda	(n=26)

Seven of the most favoured retailers are high street stores (H&M, Primark, M&S, Topshop, New Look, Zara and Next) and eight of the most favoured retailers also have e-commerce sites for online clothes sales as well as their bricks and mortar retail premises (H&M, M&S, Topshop, New Look, Zara, Next and Asda) or are dedicated online only retailers such as ASOS.

When looking at the crosstabulation presented for age and retailers frequented in Table 33 in Section 10.5.4.1 of Appendix E (page 431), a relationship is shown at the $p<0.05$ significance level for age and shopping at H&M. A relationship is also shown at the $p<0.01$ level for age and shopping at M&S, and at the $p<0.001$ level for age and shopping at Topshop. Shopping at H&M is most popular with the youngest age group 18 to 24 (40%, n=28), getting progressively less popular with each older age group. Shopping at M&S is almost the reverse of this. Most popular with the 55 to 64 (43.8%, n=14) and 65+ (33.3%, n=3) age groups, M&S is still popular with the 45 to 54 group (31%, n=13), but then decreases in popularity with younger age groups. Topshop is most popular with the youngest age group 18 to 24 (31.4%, n=22), and much less preferred by all older age groups.

6.5.4 Frequency of Purchasing

In Figure 91 and Table 34 of Section 10.5.4.1 of Appendix E (page 432), displaying frequency results of question 4, it can be seen that 34.8% of consumers purchase clothes every 3 months (n=123), although many also purchase clothing more often, 27.5% up to once a month (n=97) and 20.7% as often as 2 to 3 times a month (n=73).

6.5.5 Demographic Variables and Shopping Frequency

For the crosstabulations of the demographic and shopping frequency variables shown in Tables 35 through to 40 of Section 10.5.4.2 of Appendix E (page 433 to 438), only relationship status and shopping frequency showed a statistically significant relationship at the $p<0.001$ level. Although not statistically significant, results within other demographic variables are indicative of areas of importance for circular economy fashion strategies. The most noteworthy of these results relate to age, education level, household income level and employment status. It is also clear to see that the majority of respondents within each demographic variable category shop between 2 to 3 times a month, once a month or once every 3 months.

For age, it can be seen that the majority of the youngest age group (18 to 24) shops for clothes most frequently, at 2 to 3 times per month (38.6%, n=27). The majority of all other age groups shop between once a month and every 3 months. For education level, it can be seen that most university post-graduates shop every three months (40%, n=62), while the majority of graduates shop once a month (31.7%, n=40). Interestingly for income, the majority of those in the lowest income group still shopped every 3 months (49.1%, n=28), comparable to those in the highest income groups. Not surprisingly the majority of those in full-time employment shopped for clothes once a month (32.8%, n=45), more regularly than those who were not working for various reasons. Regarding the statistically significant relationship between relationship status and shopping frequency it can be seen that the majority of those in some form of stable relationship such as marriage (43.6%, n=44), cohabitation (34.6%, n=27) or civil partnership (30%, n=9) shopped for clothes every 3 months, while the majority of those who were not in a relationship had shopping frequencies which ranged between once a month and once every 3 months.

6.5.6 Demographic Variables and Shopping Behaviours

The mean scores of each group within each demographic variable were compared to find significant differences, possible associations and relationships between the demographic variables and shopping behaviours. Results are shown in Tables 41 to 47 of Section 10.5.4.3 of Appendix E (page 439 to 444).

6.5.7 Age and Shopping Behaviour

Significant differences were revealed between age groups regarding shopping behaviours and attitudes. Regarding interest in new brands and designs, significant differences were indicated between the 18 to 24 and 45 to 54 ($p<0.05$), and 18 to 24 and 55 to 64 ($p<0.01$), showing the younger age group to be more keen to try new garment brands and designers than both of the older age groups.

When looking for a label to prove garments were made ethically, significant differences were indicated between the 18 to 24 and 25 to 34, and 18 to 24 and 35 to 44 age groups ($p<0.01$), with the youngest age group less likely to look for proof of ethical credentials.

The youngest age group of 18 to 24 is also more likely to be looking for trend pieces when shopping for clothes as the significant differences between this age group and the next four oldest groups reveal; 18 to 24 and 25 to 34 ($p<0.01$); 35 to 44 ($p<0.01$); 45 to 54 ($p<0.01$); and especially 55 to 64 ($p<0.001$).

Those in the 18 to 24 age group are also more likely to be looking for pieces from designer ranges at high street retailers than those in the 25 to 34 age group ($p<0.01$), but less likely to be looking for fair trade clothing when shopping than the 35 to 44 age group ($p<0.05$).

In terms of feeling that shopping for clothes was a reward, significant differences were indicated between the 18 to 24 age group and the 34 to 44 ($p<0.05$); 45 to 54 ($p<0.01$); 55 to 64 ($p<0.001$) and 65 and over ($p<0.05$) age groups. Significant differences were also indicated between the 25 to 34 and 55 to 64 ($p<0.001$) age groups. The youngest age group appears to view shopping as a reward, more than the four oldest age groups, and the second youngest age group also views shopping as a reward more that the second oldest age group.

Regarding showing off new purchases, significant differences were indicated between the 18 to 24 age group and the 34 to 44 ($p<0.05$); 45 to 54 ($p<0.001$) and 55 to 64 ($p<0. 01$) age groups. Significant differences were also indicated between the 25 to 34 age group and the 34 to 44 ($p<0.05$); 45 to 54 ($p<0.001$) and 55 to 64 ($p<0. 01$) age groups. This implies that both of the youngest two age groups demonstrate more opinion showing related to fashion shopping than each of the older age groups.

Significant differences were also indicated between the 18 to 24 and 55 to 64 age groups ($p<0.05$) and the 25 to 34 and 45 to 54 age groups ($p<0.05$) regarding feeling guilty about spending after clothes shopping, indicating that the older and mid age groups feel less conscience-stricken after shopping for clothes that the younger age groups.

Regarding trends, the 18 to 24 age group showed significant differences with each of the 25 to 34 ($p<0.05$); 35 to 44 ($p<0.01$) and 45 to 54 ($p<0.01$) age groups, indicating this youngest age group cares most about shopping to keep up with trends than the mid age groups.

Significant differences were indicated between the 18 to 24 age group and both the 45 to 54 ($p<0.001$) and 55 to 64 ($p<0.05$) age groups; and the 25 to 34 age groups and both the 45 to 54 ($p<0.001$) and 55 to 64 (p0.05) age groups regarding feeling happier with the selection in their wardrobe after updating it with new clothes. This suggests that both the younger age groups feel more satisfied with clothes they already own once their overall wardrobe selection has been increased, perhaps due to the increased versatility of styles now made available to them.

6.5.8 Education Level and Shopping Behaviour

Regarding a tendency to buy the cheapest clothes, university graduates showed significant differences with post-graduates ($p<0.01$), indicating that graduates are more likely to shop for low cost fashion items than those who have carried on their education to post-graduate level.

Significant differences were also indicated between the sixth for college educated and university graduates ($p<0.05$) and the sixth form college educated and university post-graduates ($p<0.05$) regarding searching for versatile garments that co-ordinate well with other wardrobe items, suggesting those educated to sixth form level are looking to create more versatility in their overall choice of outfits than others.

6.5.9 Household Income Level and Shopping Behaviour

Regarding a tendency towards buying the cheapest clothes on offer, significant differences were indicated between the £10,000 to £20,000 income bracket and the £100,000 and over bracket ($p<0.05$), indicating that those in the higher income group are less concerned with price on clothes purchases.

Significant differences were also indicated between the £10,000 to £20,000 income bracket and the £70,000 to £100,000 bracket ($p<0.05$) regarding searching for clothes made from recycled fabric while shopping, indicating that concern for the use of recycled fabric fell from the lower income to the higher income group.

Post hoc tests were not performed for employment status, relationship status and children at home because at least one group in each variable had fewer than two cases.

6.6 Outlook on Fashion Consumption and Ethics

Questions 20 and 21 gathered data on consumers' outlook on fashion consumption and ethics by asking them about their current views and habits and potential purchasing. Respondents were also asked to make value judgements on the responsibility of various stakeholders within the fashion industry. The results are shown in Tables 132 to 134 of Section 10.5.7 of Appendix E (page 611 to 613).

6.6.1 Age and Outlook on Consumption and Ethics

Significant differences were revealed between age groups relating to outlook on consumption and ethics. Regarding ethical and environmental issues, significant differences were indicated between the 18 to 24 and 35 to 44 age groups at the $p<0.01$ level, showing the youngest age group to be less concerned about these issues than those in the older group.

However, if the style and price of ethical fashion were desirable and competitive, both of the youngest age groups of 18 to 24 ($p<0.05$) and 25 to 34 ($p<0.05$) indicated that they would be more likely to make a purchase than the older 55 to 64 age group.

Interestingly the youngest age group also indicated that they are the least likely to use re-useable shopping bags, with a significant difference between this 18 to 24 age group and the older 45 to 54 group ($p<0.05$), suggesting that decisions for the youngest age group to start consuming conscientiously would be led by style and price.

6.6.2 Education Levels and Outlook on Consumption and Ethics

Significant differences were indicated between sixth for college educated respondents and post-graduates at the $p<0.05$ level regarding the ethics of clothing brands purchased from, suggesting that post-graduates are more likely to make a purchase based on the corporate social responsibility message from garment retail brands.

6.6.3 Responsibility Rankings

In Question 21 respondents were asked to rank which group of stakeholders in the fashion industry they felt should take the most responsibility for making ethical and environmental choices, with a score of 5 indicating 'most responsible' and 1 'least responsible'. Mean scores were then calculated to give an overall ranking to each group. Results are shown in Table 135 of Section 10.5.7 of Appendix E (page 613).

Mean scores show that fashion designers, retailers, brands and shops (**FD**) were considered the most responsible for making ethical and environmental choices in fashion, with a mean

score of 3.78, followed by factories and employers (**FE**) with a score of 3.05. The government (**GO**) were viewed as being in the mid-range of responsibility with a score of 3, indicating some uncertainty on the role of the government in implementing sustainable and ethical practices. Respondents viewed the media (**ME**) as having a low responsibility with a score of 2.63, perhaps indicating a disconnected view of how media influences can shape industry practices. Customers (**CU**) were viewed as the least responsible with a score of 2.54, indicating that respondents felt that it was not down to consumers to choose conscientiously, but that these decisions should be made for them by the brands and manufacturers.

6.7 Discussion and Analysis

In order to evaluate how consumer attitudes and behaviours impact on a sustainable fashion system, 353 responses to an online consumer survey were collected which gathered data on how individuals used, disposed of, received information on, purchased, acquired and regarded the consumption of clothing both on a personal level and as part of the wider fashion landscape. Descriptive statistics were used to initially identify frequencies and trends within the sample of respondents relating to fashion shopping; garment use and divestment; influences and sources of information; and, outlook and ethics. Through crosstabulation, analysis of variance and correlation techniques, behavioural characteristics for specific demographic categories were identified. Using the chi-square statistic made it possible to identify only the statistically significant results, which were generalizable to the wider population of female shoppers from which the sample of respondents was drawn. Full statistical analysis of the consumer survey results is presented in Appendix E (page 392 to 622), along with the original survey questions, demographic data, charts and tables. Selected statistical analyses and illustrative charts have been included in this discussion section to highlight the most significant findings pertinent to a circular fashion system.

6.7.1 Garment use and divestment

Question 12 concerned the divestment of clothing. The majority of respondents reported dealing with worn out clothes by recycling them at home into cleaning cloths (29%, n=101), taking them to a recycling bank (28%, n=97) or throwing them in the bin (26%, n=93), shown in Figure 42.

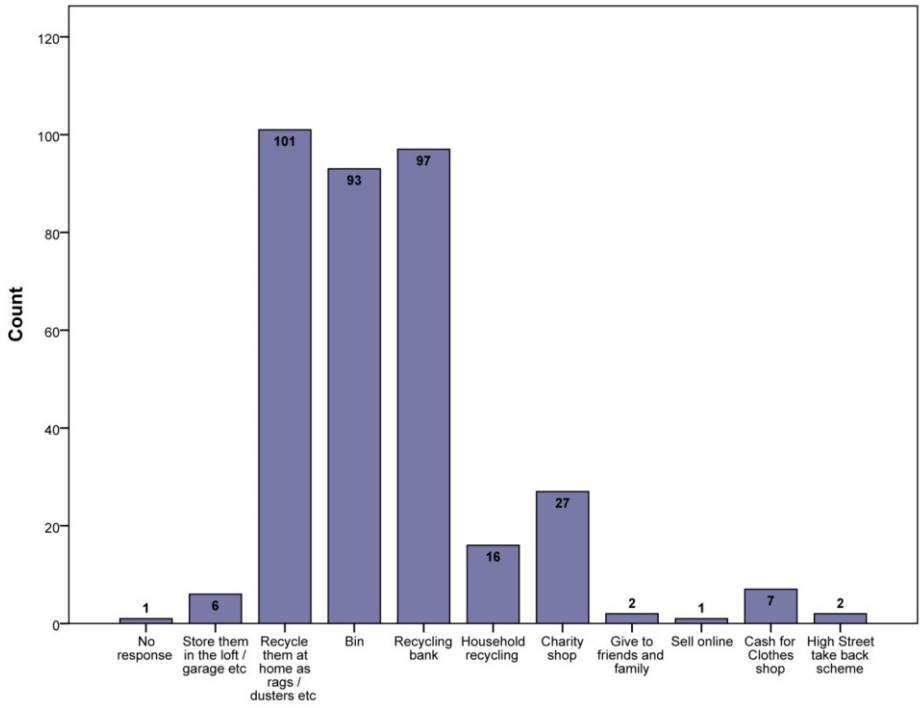


Figure 42. Q12WO. Clothes that are completely worn out

In a report outlining the evidence collected for WRAP's 'Valuing our Clothes' report, Gracey and Moon (2012) found that using old clothes and textile for rags to be the second most commonly cited way for consumers to deal with unwanted items (53%), and putting them in the bin to the third most likely scenario (48%). Domina and Koch (1999) investigated consumer methods for textile disposal alongside the reasons for disposal and found that for damaged items of little or no value, recycling at home into rags was the most common answer (91%) followed by modifying and reusing (46%). While consumers may feel they are participating in sustainable behaviours by recycling unwanted items into rags, these items will inevitably end up in the bin. As a significant proportion is also reported to be disposed of directly into the bin, together these outcomes represent the majority of unwanted, worn out clothing and textiles items eventually entering into municipal solid waste. Socks and underwear were overwhelmingly disposed of into the bin (70%, n=248), with some recycled as rags or taken to a recycling bank. As can be seen in Table 55 of Section 10.5.5.2 (page 485) and Figures 184 to 185 of Section 10.5.5.6 (page 539) of Appendix E, clothes that respondents were bored of or did not fit anymore were mostly taken to a charity shop (~50%), but some were also stored in lofts and garages (~15%), given to friends and family (~13%) or sold online (~10%), demonstrating that consumers felt there to still be some embodied value left in these items. A preference for charity shop donation is confirmed by Gracey and Moon (2012) who found this method to be the most widely used at 73%, however this is not cross referenced with for disposal reasons (such as being bored of clothing). Domina and Koch (1999) found that

consumers disposed of clothes they were bored of at garage sales and by passing them on to friends and family, again confirming that consumers felt there to be some embodied value left in these items which would be of use to others.

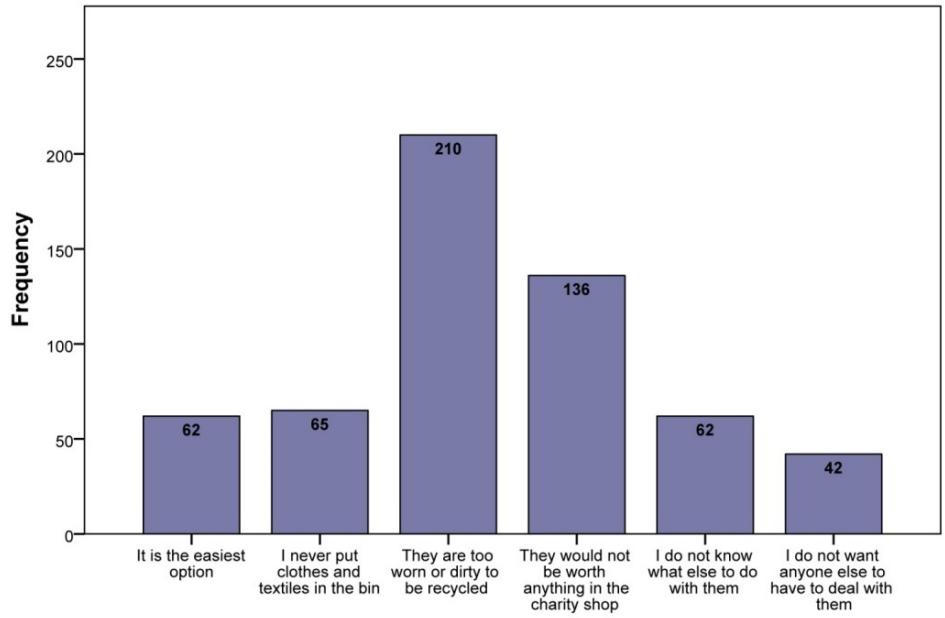


Figure 43. Q13. For your clothes and textiles that end up in the bin, is this because...

The main reasons given for throwing clothes and textiles in the bin were that respondents felt these items to be too worn or dirty to be recycled (60%, n=210), or thought that they would not be worth anything to a charity shop (39%, n=136), as shown in Figure 43. This is an indication that consumers are lacking the information, knowledge and understanding of how these items could be valued and reused in a circular economy fashion and textiles system. This is confirmed by Gracey and Moon (2012) who show that the main reason given for throwing clothes in the bin is that consumers believe they could not be used again for any purpose (75%), followed items being too personal to get rid of another way (37%) and then a belief that the items no longer have any monetary value (26%). For clothing that gets binned as it is considered too damaged or worn, it is predicted that more would be separated out for reuse and recycling if individuals were made aware that these items still represented a commercial reuse value as secondary raw materials (Gracey and Moon, 2012).

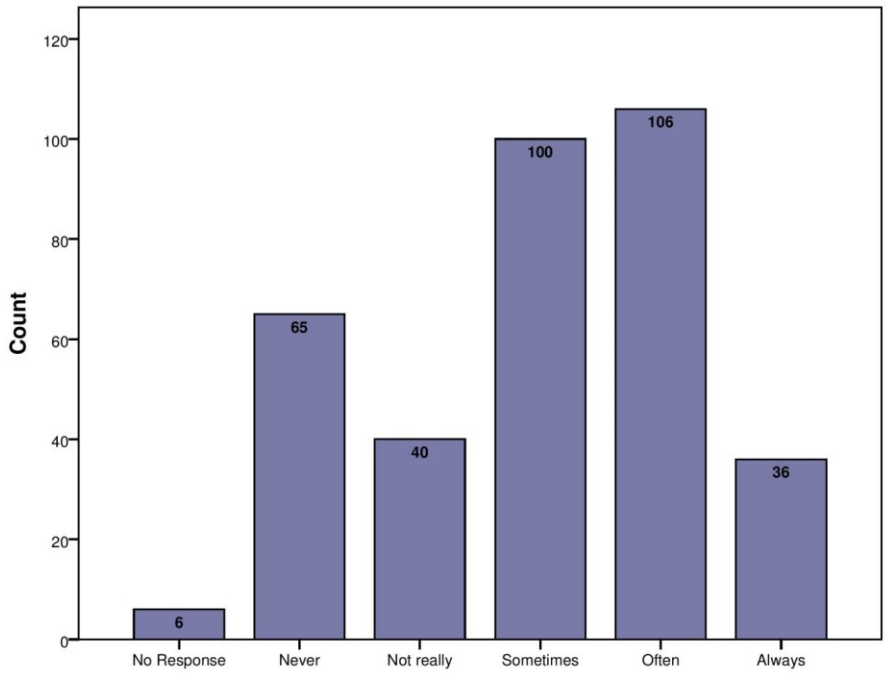


Figure 44. Q10TB. Put the old clothes in a textile bank

An opportunity is presented by these findings to communicate clearer and more accessible information to consumers on how the clothes and textiles they had regarded as waste could be collected and re-valued. Findings shown in Figure 44 indicate that 40% (n=142) of consumers surveyed would often or always put their worn out or broken clothes in a textile bank. Statistical analysis revealed that those in the 35 to 44 age group were most likely to use a textile recycling bank, with the youngest age group the least likely to do so. Gracey and Moon (2012) reported similar findings that 37% of consumers used a textiles bank to get rid of their unwanted clothes, and Bartlett et al. (2013) also report that 36% of textiles are collected through this route. As shown in Figure 45, 62% (n=218) of consumers would often or always donate their worn out or broken clothes to the charity shop. This was also shown to be the most popular option by Gracey and Moon (2012) and the largest collection route for textiles by Bartlett et al. (2013).

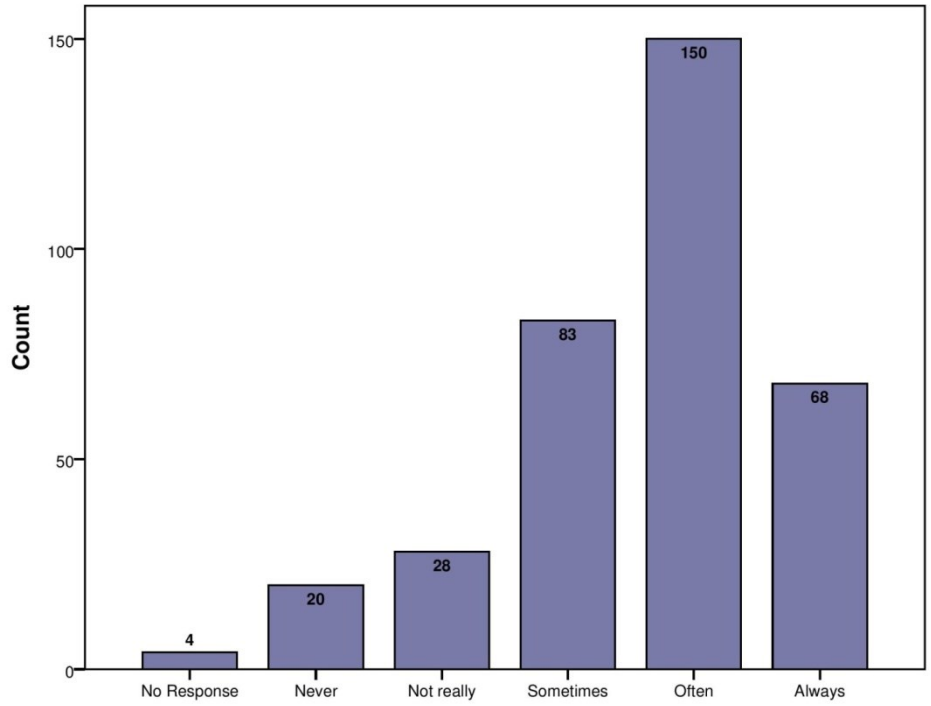


Figure 45. Q10CS. Take the old clothes to the charity shop

Convenience was the major factor affecting garment divestment behaviour, and for those donating clothes to a charity shop or placing them in a textile bank, statistical analysis revealed a clear correlation between the length of time taken to reach a donation destination and whether this was convenient or not. As can be seen in Figure 46; 13% (n=47) of respondents took around two minutes to donate their clothes, and 60% (n=212) took ten minutes. Figure 47 shows that 80% (n=282) of respondents found donating convenient. This was confirmed by a crosstabulation analysis, which indicated that the shorter the time taken to donate clothing the more convenient it was for respondents. Convenience was one of the factors affecting clothing disposal behaviours investigated by Joung and Park-Poaps (2013), prompted by evidence from Goodwill Industries (Solid Waste District of LaPorte County, 2008) that individuals would not travel for more than ten minutes to donate their clothes and textiles. Joung and Park-Poaps (2013) confirmed that convenience was significantly related to discarding behaviours and recommended that in order to promote donation and prevent discarding, collection banks should be placed in locally accessible retail locations. In addition, results from Sidique et al. (2010) indicate that greater convenience is an important factor for increasing recycling behaviour and recommended creating a greater awareness of the most convenient facilities through communication and education efforts.

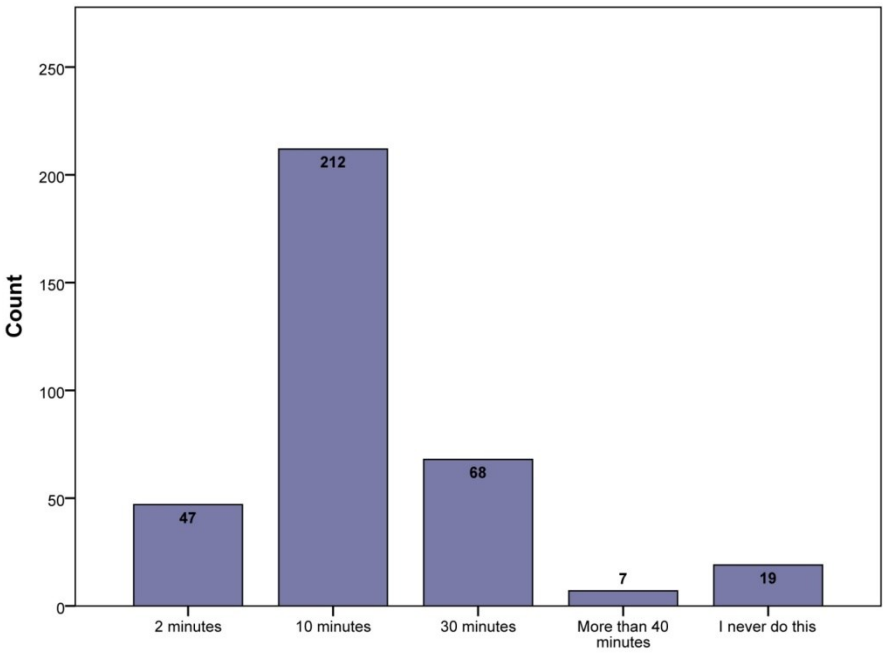


Figure 46. Q14. If you have taken clothes to a charity shop or textile bank, how long did it take you to get there?

Statistical analysis revealed that of those who only spent two minutes to make a clothing donation, 98% found this convenient. Of those taking ten minutes 91% found this convenient. Nearly 50% of those spending 30 minutes to donate did not find this convenient and nearly 60% of those spending 40 minutes or more found this inconvenient. This established proximity and convenience as a key considerations in optimising used textile collection as part of circular economy fashion system. Sidique et al. (2010) established that as the round trip distance from home to recycling site increases per mile, the number of visits to the site decreases by 1%, confirming extant research by Saphores et al. (2006) that closer proximity encourages recycling behaviour.

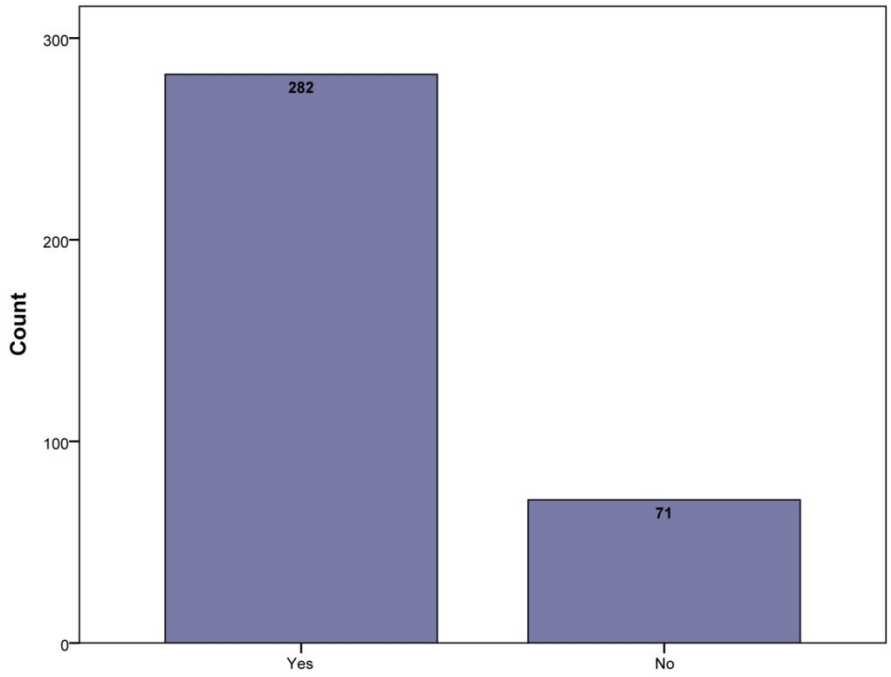


Figure 47. Q15. Did you find it convenient to get to the textile bank or charity shop?

In order to identify alternative strategies to consumption, disposal and donation, consumers were also asked about their attendance at clothes swaps. Clothes swaps function as social peer-to-peer exchange events which allow individuals to divest themselves of possessions they no longer use and to acquire those being given away by others (Albinsson and Perera, 2009).

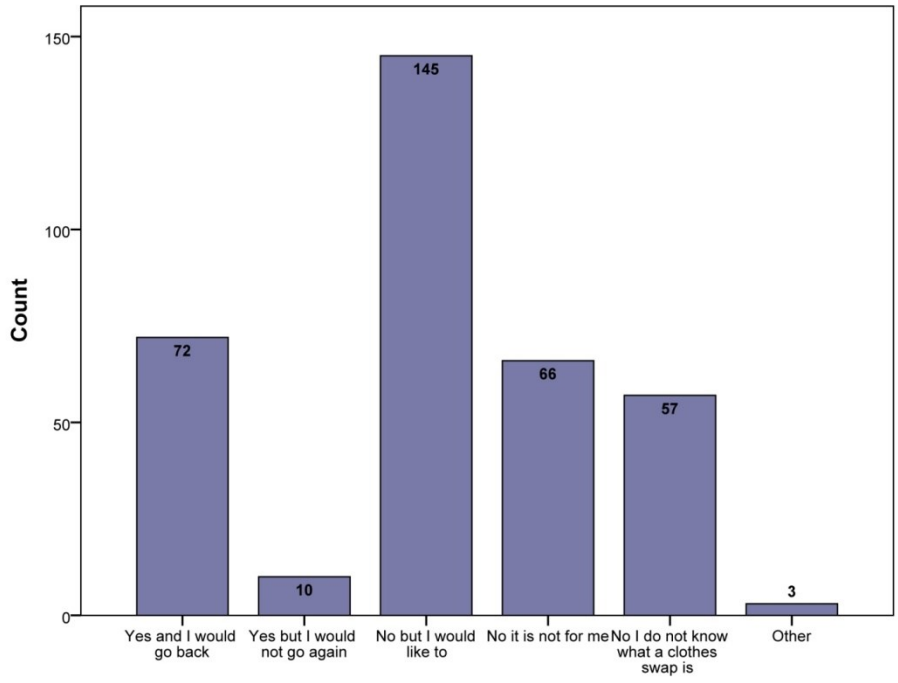


Figure 48. Q9. Have you ever been to a clothes swap?

Findings in Figure 48 show that most respondents view such events favourably. Over 40% of respondents expressed an interest in attending a clothes swap, despite not having been to one before, and 20% indicated that they had been to one, and would attend again. The 25 to 34 age group were the most likely to attend a clothes swap. These findings represent a positive indication for the formulation of alternative strategies to textile disposal and the optimisation of textile collection. Although individuals are exchanging items, significant quantities of re-useable items are also left behind and donated to charity (Albinsson and Perera, 2009), corresponding to the higher quality fraction of clothing suitable for reuse that collectors are currently most able to utilise in a circular economy system. Swap events also function as community building initiatives that serve multiple purposes as social occasions, opportunities for responsible divestment and information exchanges on sustainable consumption behaviour (Albinsson and Perera, 2012). Such events provide an opportunity for the effective sharing and receiving of new information and ideas in socially connected context. In a business model scenario created by Buttle et al. (2013) for WRAP, an online peer-to-peer exchange platform was modelled to estimate whether the large scale swapping and hiring of clothes between consumers and peers could function as a viable enterprise. It was assumed that for every four garments exchanged, one would be saved from going to waste and one would be displaced from purchase as new. With a conservative estimate of just less than 300,000 users after 10 years the model does not break even, however costs include a website build of £250,000 and three managerial staff. If numbers of active users for an online exchange platform were to reach 1.5 million after 10 years, the model would break even and environmental savings would be made of ~10,000 tonnnes of carbon and ~2,400 cubic metres of water. Clearly there is potential for environmental benefits from an online exchange system, however the platform may function more effectively as a non-profit initiative with long term funding from government, sponsorship or donations. (Buttle et al., 2013).

Findings regarding mending, repair and customisation point to strategies for keeping clothing and textiles in productive use for longer and out of waste streams, and indicate what sort of services would be required as part of a circular economy fashion system. In the consumer survey, those over 55 years of age indicated they were less likely to leave clothing in a state of disrepair that those in the 25 to 34 age group. Those in the two lowest income groups of under £20,000 p.a. were the most likely to customise, mend or alter clothes they were bored of, however those in the higher £70,000 to £100,000 income bracket were the least likely to do so. These findings indicate that providing informal education services to those in low income communities, but accessible to all would enable individuals to repair and alter their own clothes in order to keep more items out of the waste stream. McLaren and McLauchlan (2015) found that the most commonly cited barriers to clothing repair were cost, time and skills.

Providing facilitated, social and participatory repair events to support the exchange of skills and knowledge connected to mending and repair would not only enable individuals to repair their own clothes but would also provide a platform on which to engage participants on issues connected to sustainable consumption (McLaren and McLauchlan, 2015).

6.7.2 Fashion influences and sources of information

Regarding where consumers get their information from on clothes, shopping and garment disposal and their preferred ways of receiving this information, findings revealed younger respondents' position as fashion leaders. These individuals were the most likely to shop for leisure, enjoyed browsing in shops, liked keeping up with trends and liked getting style ideas from fashion magazines and websites, and were the also the least likely to find advertising annoying. This age group also indicated that being stylish and on trend was more important to them than the older age groups, and that they were more likely to view themselves as fashionable, stylish and on trend, as well as impressionable. This confirms findings by Pentecost and Andrews (2010); Kim and Hong (2011); Sender (2011) and Workman and Cho (2012) that as fashion leaders, younger consumers enjoy shopping, exhibit fanship and positive attitudes towards fashion, and derive satisfaction in making purchases which demonstrate and express their fashion knowledge and opinions.

The 25 to 34 age group identified with the characteristics of fashion followers, who were not as trend focused as the younger group of fashion leaders. This second youngest age group indicated that they enjoyed shopping for leisure, and liked to fit in with the style of their friends more than the other age groups, although all groups scored low in agreement for this statement. This group also identified themselves as being more impressionable than the older age groups, although indicated that browsing in shops, keeping up with trends and being fashionable, stylish and on trend was not as important to them as the youngest age group. Fashion followers form the vast majority of all consumers, and tend to adopt new fashions and behaviours after they have seen others doing so first, and have greater concerns for the practicality of clothing (Rogers, 2003; Morgan and Birtwistle, 2009). These findings indicate that in order to collect used clothes and textiles from the younger fashion leader and fashion follower groups, locating and promoting collection services in fashion retail contexts would be the most effective strategy to target these consumers. As both younger age groups display fashion leadership and follower properties, targeting these groups to change the way they shop is likely to have the most impact on the fashion system. As stated by Kang and Park-Poaps (2011), fashion leaders are significant in their role to influence opinion, and followers are important as critical players, following by example and in generating sales.

For the over 35 age groups, statistical analysis indicated that they were less likely to shop for leisure or enjoy browsing in shops. Trends were unimportant to them, as was fitting in with the styles of peers. Over 35 age groups were much less concerned with being fashionable, stylish or on trend and did not view themselves as impressionable as revealed in ANOVA tests to Likert scale responses in Table 106 in Section 10.5.6.1 of Appendix E (page 554). According to Sender (2011) supermarket clothes shopping peaked among the 35 to 54 age groups, indicating that implementing circular economy fashion strategies in supermarket garment ranges could work to target those less engaged with fashion media and trend information. In fact, the 35 to 44 age group were the most likely to be put off by excessive advertising, although as can be seen in Figure 49 61% of all respondents to the survey (n=216) indicated that they were often or always put off by advertising, indicating that circular economy fashion should connect with individuals through more socially engaging means.

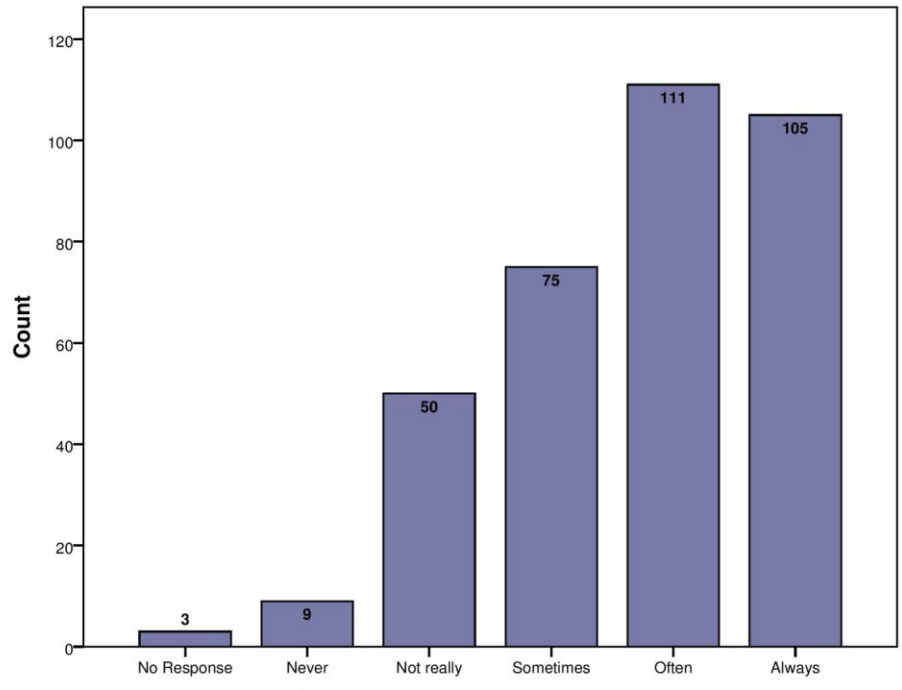


Figure 49. Q8AD. I find advertising a bit much, it is everywhere

Post-graduates were most likely to want to dress in a smart and business like way and view themselves as eco-conscious and responsible. Sixth form college educated respondents were most likely to dress in a casual and relaxed way and want to fit in with other around them, although all respondents scored low on this statement. Those on the lowest income of under £10,000 per year were the least likely to view themselves as impulsive shoppers and were the most likely to view themselves as creative. Those in the next lowest income group of £10,000 to £20,000 were the least likely to want to dress in a smart and business like way, but the most likely to wear alternative clothing styles.

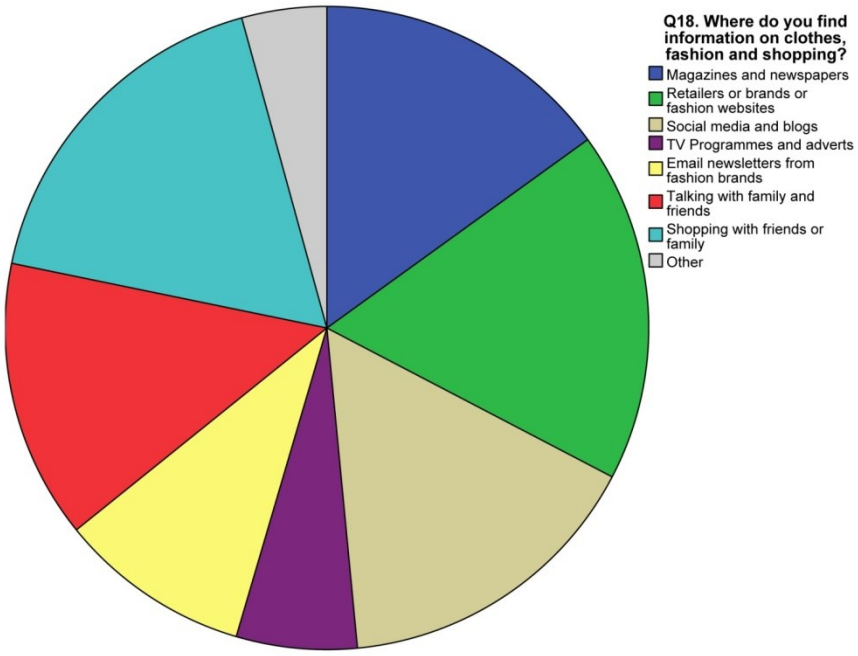


Figure 50. Q18. Where do you find information on clothes, fashion and shopping?

Responses regarding preferred sources of information, as shown in Figure 50, indicate that respondents found information on fashion, clothes and shopping from retailer, brand or fashion websites (45%), while shopping with friends and family (44%), through social media and blogs (40%), in magazines and newspapers (38%) and while talking with friends and family (35%). Preferences for online channels of communication such as websites and social media indicate that these would be ideal platforms for those working within circular economy to engage with consumers by providing information on product provenance, purchasing, use, maintenance and divestment and the opportunity for consumers to interact and collaborate on the implementation of sustainable design strategies. As highlighted by Beard (2008), the internet has been most useful in facilitating the promotion of start up ethical fashion brands, and has also been where the latest sustainable fashion collections are released on brand websites, with accompanying information regarding the traceability of products (Shen et al., 2014b). Preferences for receiving information through social interaction, whether online or in person indicate that an opportunity exists for circular economy fashion to engage with individuals through social shopping. In this way individuals are able to interact with peers, become affiliated to social groups and participate in opinion sharing; resulting in greater satisfaction with an enhanced experience. (Benjamin, 2010; Kang and Park-Poaps, 2011; Kim and Hong, 2011).

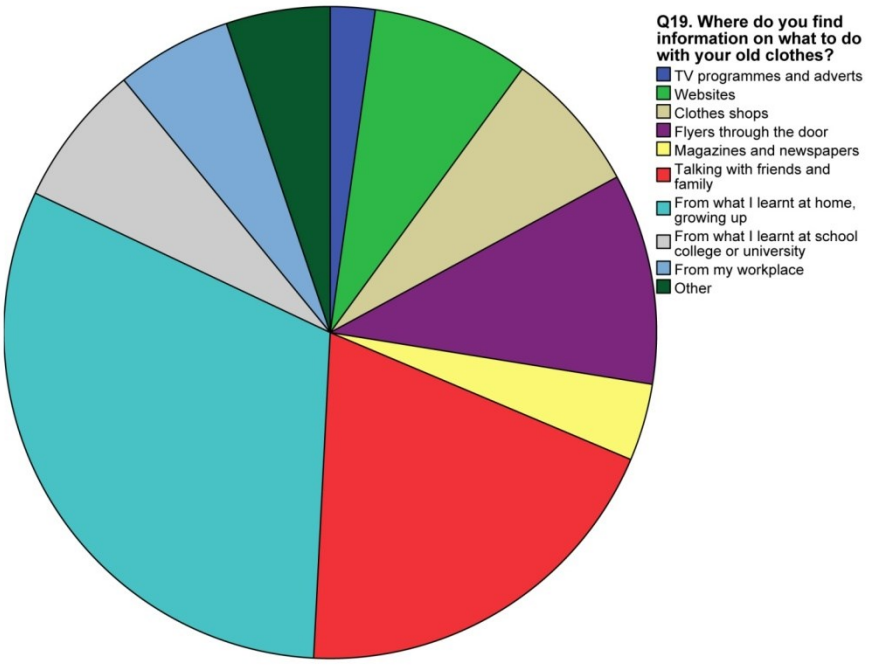


Figure 51. Q19. Where do you find information on what to do with your old clothes?

Around 60% of respondents learnt what to do with old clothes and textiles from home, while growing up, 37% while talking with friends and family and 20% from flyers through the door, as shown in Figure 51. This confirms the influence of parents, family life and peers on the consumer behaviour and decisions of children and young people (Joung and Park-Poaps, 2013). Findings show younger respondents expressed the strongest preference for receiving information through social interaction, either online or in person, using social media and blogs or talking or shopping with friends and family. In order to connect with the younger fashion leaders and fashion followers, using socially engaging communication through social media, online content and shared peer and family experiences would yield the most effective results in promoting responsible divestment options for circular economy fashion.

6.7.3 Fashion shopping behaviour

Regarding the types of shop frequented, the most popular methods of fashion shopping were online (66%, n=234) and on the high street (62%, n=220), as shown in Figure 52. These findings are confirmed by the latest figures from Mintel, which show two thirds of women have bought clothes online, rising to 76% of under-35s (Mintel, 2016g). 75% of female shoppers, particularly those under 45, still also shop on the high street (Mintel, 2016c). High street shopping was most popular with the youngest age group of 18 to 24 (74%, n=52). Although still popular with a high proportion of the next two oldest groups and significant numbers of the next three age groups, high street shopping declined in popularity in direct relation to age. Correlation analysis also indicated that high street shopping had a weak negative correlation

with age (r_s=-0.166, p<0.01) suggesting that younger respondents favour the high street more than older respondents do. This is also confirmed by Mintel data which shows that 87% of young shoppers aged 15 to 24 shop on the high street and 58% shop online (Mintel, 2016h). This finding presents an additional challenges to circular economy fashion, as younger respondents who represent a high fashion purchase and divestment frequency (Birtwistle and Moore, 2007; Pentecost and Andrews, 2010) favour the high street, are trend focused and drawn to newness; characteristics which are currently at odds with the sustainability principles at the heart of circularity. In order to engage these consumers, new strategies will need to combine sustainability with high turnover fashion in more cyclical methods of production, consumption and divestment.

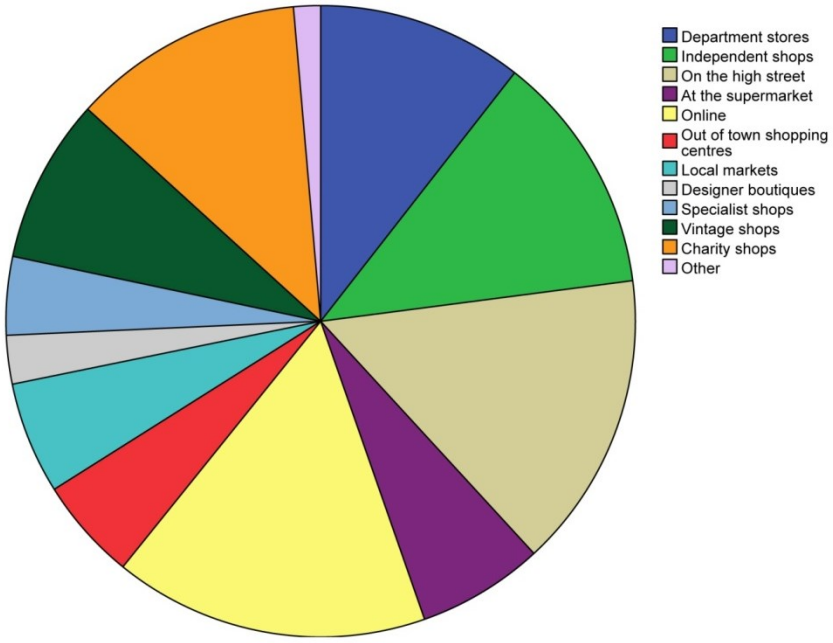


Figure 52. Q2. Where do you prefer to shop?

Although high street shopping was particularly favoured by younger respondents, respondents earning over £70,000 per year favoured department stores, and charity shops were popular with self-employed respondents. The top three retailers frequented by respondents were H&M, charity shops and Primark, indicating that value for money was a high priority. This is confirmed by findings from Mintel (2016d) which show Primark to be the most popular place for women to buy clothes, particularly among price-driven 16-34s. Primark also remains the most popular place for buying clothes among young consumers (Mintel, 2016h). Younger respondents favoured H&M, while older groups favoured Marks and Spencer, demonstrating that high street shops were popular with all age groups. Mintel (2016c) find H&M to be the biggest winner with young shoppers over the past two years, earning a 12% increase in 15-24 year old shoppers on the back of popular designer collaborations, an extended range and

a focus on diversity within its campaigns. Mintel (2016b) also confirm Marks and Spencer's popularity with older women, finding the brand to have had a 14% increase in over-55 store shoppers and a 5% decline in 16-34s, although 35% of women are reported to have made a purchase with the brand. The indication that these consumers are loyal to the high street does signify where the most effective changes could be made. Were sustainable practices to be adopted as standard by mainstream production, consumers would then be presented with implicit circularity without having to opt for this choice.

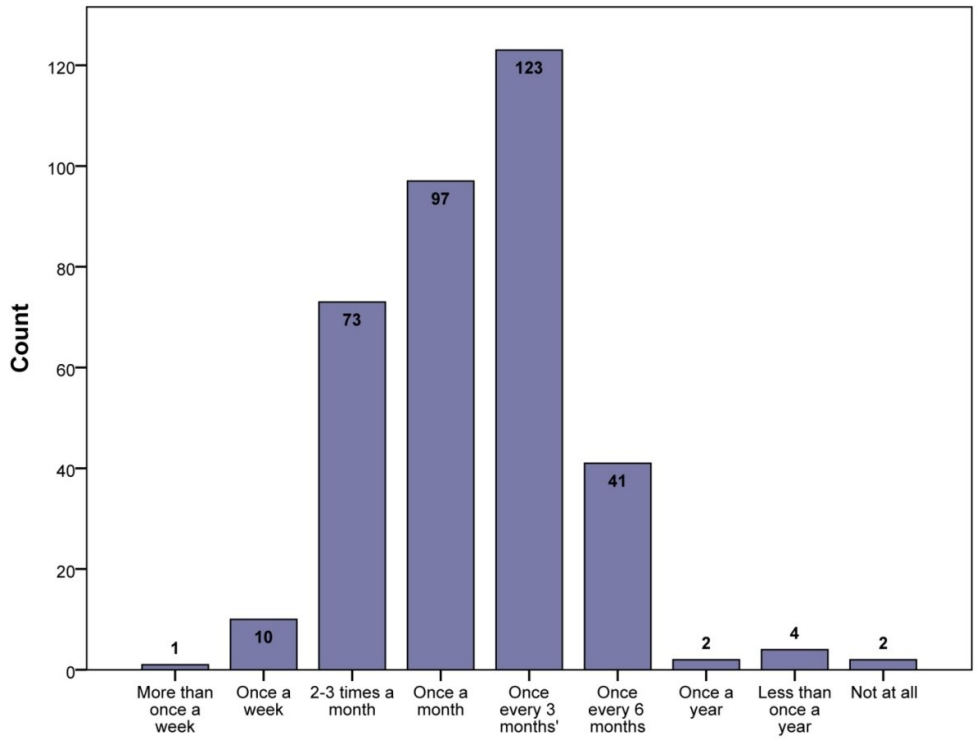


Figure 53. Frequency of Purchasing

As shown in Figure 53 35% of respondents shopped every 3 months, however just over 51% shopped even more frequently, between once a month and 2 to 3 times a month. Data from Mintel (2016a) shows that 36% of male and female consumers bought clothes once every 2 to 3 months and that 37% shopped more frequently, between once a week and once a month. Of the female consumers making a purchase once a month or more often, this included 53% of 16 to 24 year olds and 42% of 25 to 44 year olds (Mintel, 2016b). Results from the study indicate that respondents in relationships shopped more routinely around every 3 months, where as those not in a relationships showed more variance in their shopping frequencies. These findings represent a further challenge for circular economy fashion, which emphasises less frequent and more conscientious purchasing. Providing alternative fashion engagement strategies to replace the shopping experience could work to change the behaviour in favour of more sustainable consumption.

When respondents were surveyed on how they felt about fashion shopping, once again, younger respondents also exhibited more fashion leadership and fashion follower characteristics than older respondents did. The youngest age group of 18 to 24 were more concerned with trends, new brands and designs, and designer ranges available on the high street than older groups. Fashion fanship and a positive attitude towards fashion are both indicators of fashion leadership (Pentecost and Andrews, 2010). Both of the two youngest groups of 18 to 24 and 25 to 34 also found buying clothes a rewarding activity, which provided an opportunity to display fashion knowledge in 'showing off' and sharing the news of their purchases with peers. Once again, enjoyment of shopping and satisfaction in demonstrating up to date fashion opinions are strong signs of fashion leadership (Kang and Park-Poaps, 2011; Kim and Hong, 2011; Sender, 2011b). Both of the youngest groups also felt buying new clothes made them happier with their current wardrobe selection, although feelings of guilt at spending were also associated with shopping behaviours.

Respondents in the over 35 age groups were much less concerned with trends, new brands and designs, and showing off new purchases. These older groups also did not feel that shopping made them happier with their current wardrobe and did not find shopping as rewarding as the younger groups, although did not express the same feelings of guilt as younger respondents. Respondents educated to sixth form college level expressed more of a preference for versatile clothing items than graduates or post-graduates. University graduates expressed more of a preference for the cheapest clothes available than post-graduates, as did those on lower incomes than higher. Data from Mintel indicates that young shopper prioritise low prices and that 69% of 16-24-year-olds say low pricing is an important factor when clothes shopping (Mintel, 2016f).

6.7.4 Outlook on Fashion Consumption and Ethics

As well as being the most likely to use a textile recycling bank and be put off by excessive advertising, the 35 to 44 age group also indicated that they were the most concerned about ethics and environmental issues. This group indicated they were the most likely to search for fair trade clothing when shopping and to look for a label to prove a garment was made ethically. These findings, in combination with the lack of concern for trends and shopping expressed by the over 35 age groups indicated that consumers over 35 are currently the most closely aligned with the conscientious consumption and ethical preferences represented by circular economy fashion. Additional positive signifiers for engagement with sustainability were indicated by post-graduates, who were the group most likely to have already purchased clothing from an ethical brand, those in the 45 to 54 age groups who were the most likely to use re-useable shopping bags and those in the £10,000 to £20,000 income bracket who were

the most likely to shop for clothes made from recycled fabric. These findings are broadly consistent with those of Mintel (2008) regarding green and ethical consumers who are characterised as being mostly women, aged 35 to 54 and in professional, administrative and managerial positions. These consumers are recognised as being the most demanding as well as the most active and responsive to ethical and environmental issues (Mintel, 2008).

In an investigation into the motivations of sustainable fashion shoppers, Bly et al. (2015) identified three key themes to categorise the findings regarding these consumers. The first theme was that of 'consumption as the antithesis to sustainability'. This was characterised by participants' rejection of the societal pressure to consume and of commercialisation, and a general mistrust of multinationals efforts to engage with sustainable practices. This supports findings which indicate that the 35 to 44 age group are the most consistent with sustainable fashion consumption through their rejection of excessive advertising, lack of concern for trends and shopping, and higher concerns for ethical and environmental issues. Bly et al.'s (2015) second theme was that of 'sustainability facilitating style'. Participants of Bly et al. (2015) study rejected the notion of 'fashion' and preferred instead to define themselves through personal style choices. This is also consistent with the rejection of commercialisation expressed by the 35 to 44 age group, and enabled 'empowerment through the avoidance of status goods and competitive hierarchies.' Individuals were able to make more discerning choices in their consumption for a more rewarding experience. (Bly et al., 2015). This is consistent with Bly et al.'s (2015) third theme that 'sustainable fashion should be a source of well-being'. The process of engaging with sustainable fashion became experientially rewarding in the choice to avoid mass produced goods and to opt for socially and environmentally responsible choices (Bly et al., 2015). Challenges were still presented in comprehending the complexities and lack of clarity presented by sustainability, and direct experiences with the industry offered more to enable understanding than facts and figures. Participants reconceptualised their own engagement with sustainable fashion to make it relevant to their own lifestyles and resources, by opting to buy from local artisans or to buy second hand and make their own clothes rather than following the prescribed notions of ethical, organic, fair trade or recycled fabrics. Broader concepts of freedom, uniqueness, authenticity, resistance and well-bring, plus personal style had been incorporated into their strategies to achieve sustainable consumption goals. In order to engage more individuals with sustainable consumption it will be necessary for the industry to frame it in the context of rewarding experiences, self expression and personal style, rather than fabric selection and recycling. (Bly et al., 2015).

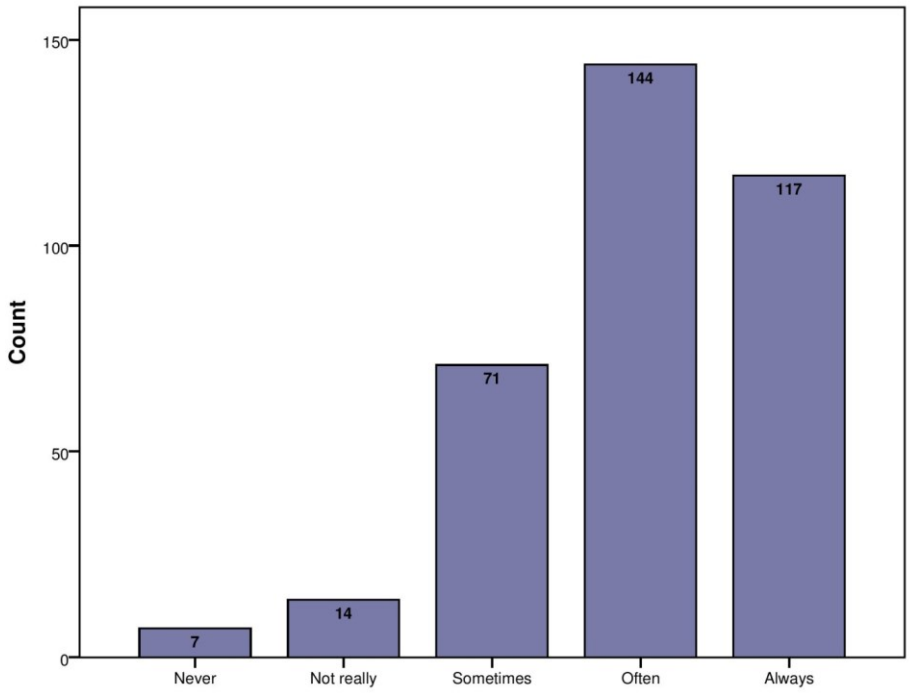


Figure 54. Q20SP. I would buy ethical fashion if the style and price were right for me

Ethical and environmental issues were not a priority for the 18 to 24 age group, who indicated that they were the least likely to search for a label to prove a garment was made ethically, or to search for fair trade clothing. This at odds with data from Mintel (2016c) which indicates that 16-24s are the most concerned with sustainable clothing, however Mintel (2016c) also report that the 16-24 age group are the least likely to opt for clothes made in the UK, indicating that this group do not make a link between global sourcing and the environmental impact of fashion. This youngest age group was also the least likely to use reusable shopping bags, although it was indicated that this group and the 25 to 34 age group were ready to purchase ethical fashion if the style and price were right for them, indicating that compelling design and affordable prices were the deciding factors, rather than ethical credentials. In fact, as can be seen in Figure 54, nearly 74% (n=261) of respondents indicated that they were 'often' and 'always' ready to purchase ethical fashion if the style and price were right for them. Although this is a positive indication for circular economy fashion, challenges will lie in creating compelling designs with market sensitive pricing and integrating into the mainstream at scale (Sinha et al., 2016). Circular economy fashion will have to find a way to compete with retailers leading with low prices and high volumes. Style, quality and low prices were found to be the three most important factors when buying clothes to female fashion shoppers, however further analysis indicates that a prevalent and unsustainable culture of discounting in the fashion industry is currently undermining retail pricing and impacting the profitability of businesses (Mintel, 2016f).

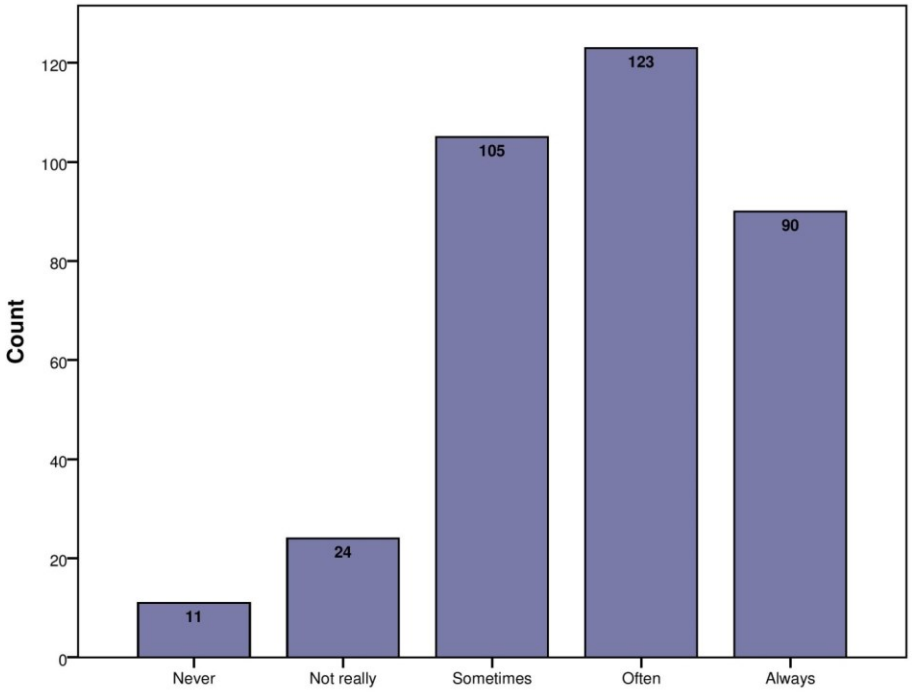


Figure 55. Q20EE. Ethical and environmental issues are important to me

Figure 55 and Figure 56 show responses which illustrate and confirm the values action gap denoted in past literature. 60% of respondents (n=213) claim that ethical and environmental issues are 'Often' and 'Always' important to them, however only 21% (n=77) indicated that they had 'Often' and 'Always' purchased clothing because of the ethics of the brand making it. The gap of 39% of survey respondents who are yet to translate their concerns into more responsible behaviour represent the 'values action gap' reported at 30% by Young et al. (2010). In a report for Mintel (2016c) only 12% of female fashion consumers indicated that the ethical treatment of workers was a priority when buying clothes, only 8% prioritised clothes made in Britain and only 8% sought out sustainable clothing. (Mintel, 2016a) have expressed the opinion that consumers are often *'too lazy, cash-strapped or short of time to turn their ethical sentiments into action, prompting them to look for retailers and brands to do the good work for them'*, and recommend that high street retailers should move in more sustainable directions by offering ethical choices to customers. Goworek et al. (2012) found that individuals have little awareness of the sustainability impacts of clothing, with maintenance and disposal influenced by existing habits and routines. It was indicated that consumers could be persuaded to change their behaviour in relation to sustainability by being encouraged and enabled to reflect more on their behaviour, and that this could be facilitated by the provision of more information from retailers and the government (Goworek et al., 2012).

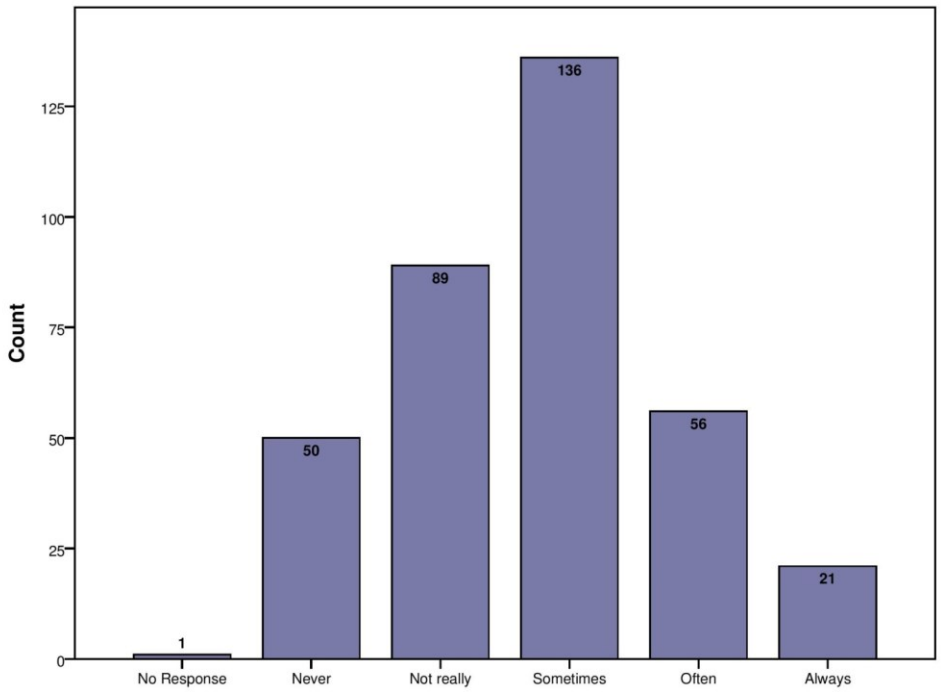


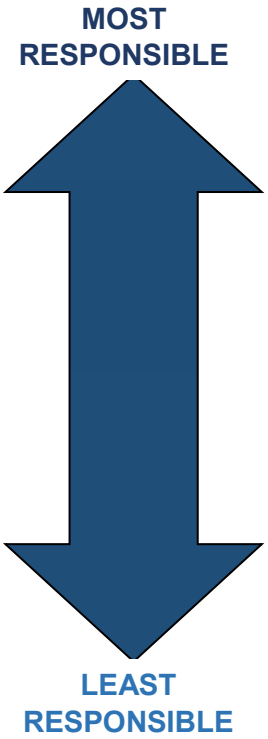
Figure 56. Q20EB. I have purchased clothing because of the ethics of the brand making it

When asked to rank fashion industry stakeholders in terms of responsibility for ethical and environmental choices as shown in Table 20, respondents indicated that they viewed customers to have the least responsibility, and designers, brands and shops to have the most, followed by factories and employers, the government and the media. These findings indicate that consumers expect to have ethical and environmental considerations taken care of by those selling them their clothes, and that as consumers they feel little responsibility for making ethical choices themselves. It may be that consumers feel powerless to make ethical and sustainable choices due to a lack of knowledge and understanding, and that they would prefer to have these decisions made on their behalf by retailers who adopt sustainable practices as standard. This indicates that respondents viewed retailers and brands as having the most power to effect change, however findings from Mintel (2008) show that 61% of consumers think that big retailers are motivated by profits and only take action if there is a cost saving to them, indicating that consumers do not have a very positive view of the motivations of the brands and retailers they choose to buy from. Mintel (2008) findings also shows that 53% of consumers think clothing retailers should make it clear whether garments have been produced to a recognised ethical standard, confirming that consumers place the greatest responsibility with retailers, followed by those producing products. 39% would consider boycotting a brand or retailers if they were found to be sourcing goods made under hardship conditions, again indicating that they place high responsibility with brands, retailers and producers. 34% of consumers think the action of individuals will make little difference if government and big corporations do not change, placing responsibility with the government and corporations.

Again this confirms that that many consumers feel powerless to effect any real change themselves, despite being able to make purchase decisions relevant to sustainability issues.

Table 20. Mean Scores for Responsibility Ranking

1	3.78	Q21FD	Fashion Designers, Retailers, Brands and Shops
2	3.05	Q21FE	Factories and Employers
3	3.00	Q21GO	The Government
4	2.63	Q21ME	The Media
5	2.54	Q21CU	Customers



Respondents expressed a majority concern for ethical and environmental issues (Figure 55) and displayed a clear 'values action gap' in translating these concerns into actual behaviour (Figure 56), yet place greatest responsibility with brands and designers (Table 20). This indicates that ethical and sustainability issues should be integrated into mainstream fashion as standard practice, offering consumers the implicit sustainability which they already believe should be present and enabling them to incorporate responsible choices into their regular behaviour. Zane et al. (2015) recommended that companies who wished to make the ethical credentials of their products a selling point needed to have this information easily accessible and freely available, so that all consumers felt included in the message without feeling that others with more knowledge stand in judgement over them. Communicating how good practice enables all stakeholders to be equally responsible for ethical choices would work towards a consumer understanding of shared accountability. Enabling ethical behaviour for consumers who have often associated more negative feelings towards such issues is vitally important in ensuring commitment to a shared responsibility of ethical and environmental choices (Zane et al., 2015).

7. A Conceptual Framework and Communication Strategy for a Circular Economy Fashion and Textiles System

This chapter draws together results, analyses and discussions from the textile collection case studies, circular economy fashion interviews and consumer survey in Chapters 4, 5 and 6. Outcomes are evaluated in relation to the literature reviewed in Chapter 2 to establish the emerging discussion and analysis themes for this chapter. Findings from the consumer survey revealed the motivating factors affecting purchasing, use and divestment of clothing and textiles. Circular economy interviews established what the successful strategies and limiting barriers are to the wider integration of sustainable fashion, and how to optimise the system to overcome limits. Textile collection case studies indicated how to advance full circularity in a fashion and textiles system. Themes emerging from these findings indicate that to enable circular economy fashion to compete with and integrate into the mainstream, a framework detailing the core aspects of a circular economy fashion system is necessary. A conceptual framework for transitioning towards a circular economy fashion system has been established in this chapter. The framework locates each stage in the system in relation to those it is linked to, and the material and information flows required between stages. Research outcomes highlighted communication as a fundamental influencing factor for sustainable behaviour, and it is necessary that effective communication and information flows are managed between all stakeholders in a circular economy fashion system. Findings indicate that textile collectors and sustainable fashion practitioners both require better information and strategies on how to communicate and engage with consumers. Consumers in turn expect to have ethical and environmental issues taken care of on their behalf by brands and retailers, highlighting a disconnected nature between current communication approaches. An effective communication strategy has also been developed in this chapter to fully engage all stakeholders in a circular fashion system with good practice and sustainable behaviour patterns.

7.1 A Conceptual Framework for Circular Economy Fashion and Textiles

Findings from the textile collection case studies, circular economy fashion interviews, consumer survey and literature informed the construction of each stage in the framework; which is informed by the WRAP (2010) textiles circular economy model and the Ellen MacArthur Foundation (2014) circular economy model, as shown in Section 2.2.3 of the literature review. Both models aim to reduce the input of new materials into the system and

reduce the amount of material sent to landfill or incineration by emphasising the inter-linking stages of material flow to extend the useful life of products.

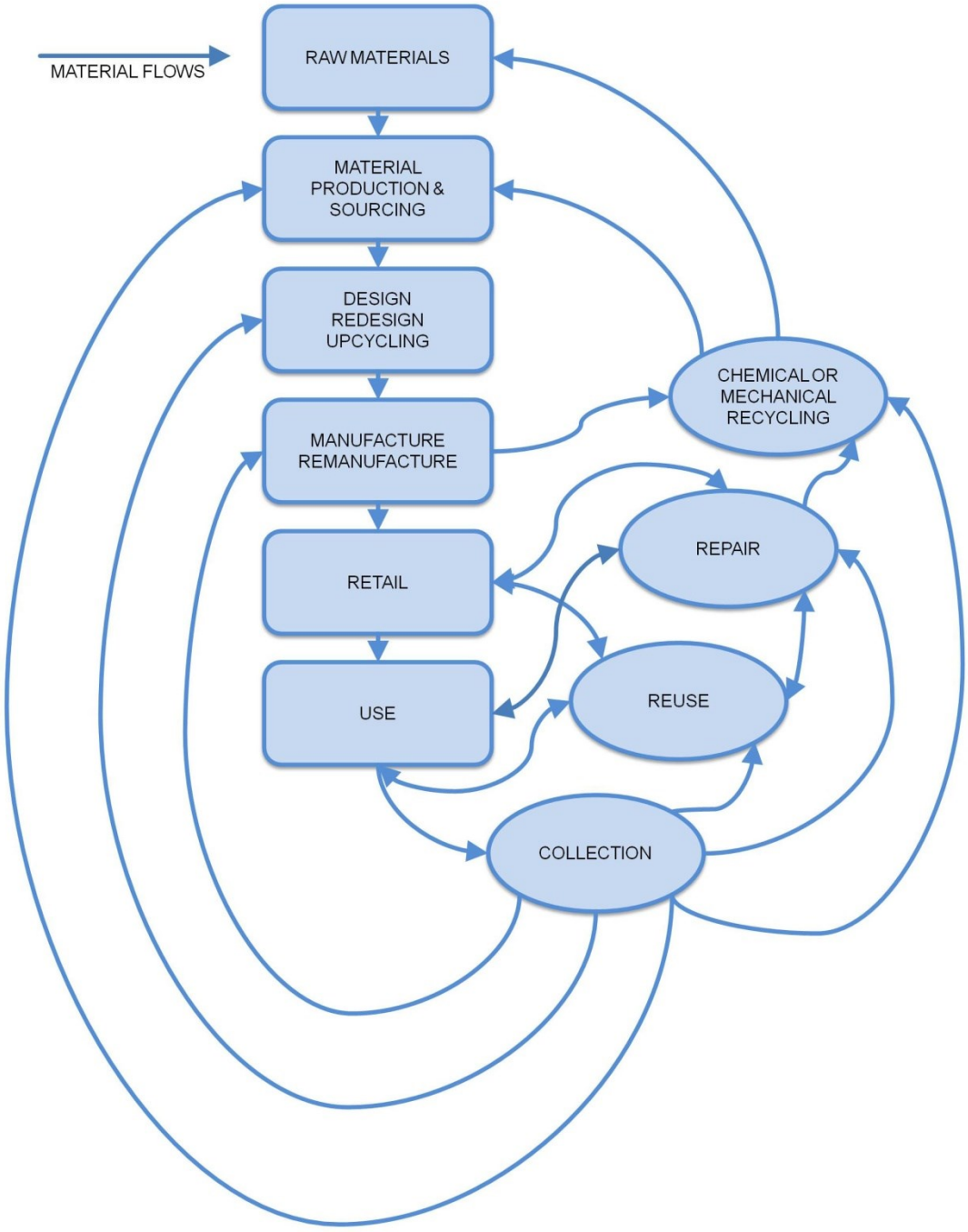


Figure 57. A Conceptual Framework for Circular Economy Fashion

The strengths of this approach lie in highlighting the cascading reuse option to keep existing materials in productive use for longer for maximum lifecycle savings. However, omissions of 'design' and / or 'communication' as distinct stages or flows in the circular economy limit the effectiveness of both the WRAP and Ellen MacArthur Foundation models. Although literature indicates that EMF model is implicitly sustainable 'by design' (Ellen MacArthur Foundation,

2013b), ‘design’ is not shown as a distinct stand alone stage. The EMF model is also not specific to fashion and textiles, but takes a broader industrial approach, which limit stages applicable to the fashion industry. The WRAP model has the advantage of being specific to textiles, however ‘design’ is combined with ‘manufacturing’, limiting the significance of this stage in setting a precedent for good practice throughout the supply chain. As established in Section 5.3.1 of Chapter 5, the design stage is the key opportunity to make decisions affecting the sustainability of the entire supply chain, including redesigning, upcycling and remanufacturing products for extended lifecycles. This is supported by Spangenberg and Lorek (2002) who report that more than 80% of the environmental impacts of a product are determined during the design phase. Both the WRAP and EMF model omit communication as a stage or flow in the circular economy, showing only material feedback loops. Communication and information flows are present between each and every stage of the circular economy, and it is of key importance that all stakeholders can access a two way dialogue to create full understanding and transparency. Inadequate communication between stages can adversely affect product development both within organisations and externally (Carr and Latham, 1994). For this reason, material flows (Figure 57) and communication flows (Figure 59) have been modelled separately for the conceptual framework for circular economy fashion. The framework links pre-consumer material stages of raw materials, material production and sourcing, design, redesign and upcycling, manufacture and remanufacture and retail with the post-consumer stages of use, collection, reuse and repair and recycling which in turn link back to material processing stages. Material feedback loops can be created by the stages and flows in this framework which apply directly to the three ‘Circular Economy Fashion and Textiles Business Models’ proposed in Chapter 2, Section 2.3. These feedback loops demonstrate the resource efficiencies which would occur as the direct result of operating each enterprise as part of the circular economy. The function of each element of the conceptual framework for circular economy fashion has been expanded on terms of its necessity, requirements and impact, and linkages between consecutive stages of the cycle.

7.1.1 Raw materials

Processes from raw material to garment account for 1/3 of the waste footprint, 3/4 of the carbon footprint and almost the entire water footprint in the clothing and textiles lifecycle (WRAP, 2010). SOEX claimed that only 20% of textiles are recycled each year globally (Ditty, 2015). If more used textiles were to be used as raw materials in the production of recycled fibres, carbon savings of around 4 tonnes of emissions could be made for each tonne of used textiles remade into new products (McGill, 2009; Michaud et al., 2010). In the UK, of the 53% of textiles sent to landfill and 13% sent to energy from waste from residual household waste sources, a potential 1.7 million tonnes is available for fibre recycling purposes, which could

generate in excess of £200 million for those supplying the feedstock. Recovering just 10% of this amount could generate a value of ~£25 million. (Bartlett et al., 2013). The use of secondary raw materials would enable circular economy fashion to make maximum lifecycle savings across the supply chain. This is illustrated in the framework by material linkages between the collection of used textiles and recycling, feeding into raw materials and material production. Communication flows for raw materials link to retail, recycling and material production, to ensure transparency and traceability for all stakeholders. For the limited quantities of new materials entering into a circular economy fashion and textiles system, consideration must be made for the triple bottom line impacts linked to the life cycle of the goods they will be used in (Nordic Fashion Association, 2011).

7.1.2 Material production and sourcing

Regarding ethical and sustainable considerations in material sourcing, further environmental savings could be made by preventing material production through reuse. The collecting, processing and transport of used textiles has insignificant negative impacts on the environment in comparison to the savings achieved by replacing newly made garments manufactured from virgin materials (Woolridge et al., 2006; Farrant et al., 2010). As a circular economy fashion strategy, upcycled production utilises already existing materials, preventing the further production of virgin materials and the associated environmental burdens. The reuse of 100 garments would save between 60 and 85 new garments and result in a 14% decrease in greenhouse gas emissions or 45% reduction in toxic pollution, for a cotton or polyester garment (Farrant et al., 2010). Environmental savings could also be made in sourcing sustainably produced materials such as recycled polyester. The production of one tonne of polyester requires ~125 gigajoules of energy. This is almost halved for recycled polyester, which requires ~65 gigajoules of energy, and also saves the use of petrochemical based primary raw materials. (Dawson, 2012). An example of effective circular economy material usage can be found in the collaborative production between Speedo and Aquafil (www.aquafil.com, 2017; www.speedo.com, 2017). Production waste from Speedo swimsuits is used in the production of regenerated Econyl material, which is claimed to be ten times more durable than standard swimwear and can be infinitely recycled with no loss of quality (www.econyl.com, 2017). The advantages of such a strategy lie in preventing the use of petrochemical raw materials and the aforementioned energy burden. Circular economy fashion utilises reused, recycled and sustainably produced materials whenever possible to prevent the negative impacts associated with newly made materials. This relates directly to the business model for ‘A Circular Fashion Brand’ outlined in Section 2.3.2 of Chapter 2. Material choices are made as the starting point to design and production and influence all downstream impacts, as established in Section 5.3.1 of Chapter 5. This is shown in the

framework as links between used textile collection, recycling, raw materials and material production and sourcing leading into design, redesign and upcycling. Manufacture and remanufacture also link into recycling to illustrate how the textile waste from these activities can be utilised as part of a circular economy fashion system.

7.1.3 Design / Redesign / Upcycling

The design brief is the key opportunity to build in sustainable strategies to meet consumer and user requirements throughout each stage of the circular economy fashion supply chain; and should establish common goals for the design team to adopt a systems based approach which takes into account material savings, provenance, impact, user behaviour and end-of-life considerations (Lockton et al., 2010; Blizzard and Klotz, 2012; RSA Action Research Centre, 2013; Ellen MacArthur Foundation, 2016; The Great Recovery Project, 2016). A design-led approach ensures compelling product offerings, which creates a strong brand identity to present to consumers. As 74% of respondents in the consumer survey expressed that they would be ready to buy sustainable fashion if the style and price were right (Section 6.7.4 of Chapter 6), a design-led approach should be followed with market sensitive pricing (Sinha et al., 2016). A slow fashion, trans-seasonal approach opts out of the traditional dictates of the fashion season schedule and offers enduring and regularly available styles that can be gradually adapted and changed over time according to material supply, current fashion and updated style preferences. The unique aesthetic of upcycled fashion is the result of a flexible design formula which allows for fabric substitutions to take into account the changeable nature of material supply. This is characterised by a panelled and ‘patchwork’ style of pattern cutting to make best use of scarce resources. This is illustrated by the feedback loop from used textile collection leading back into materials production and sourcing and design, redesign and upcycling, before this stage links to manufacture / remanufacture.

Barriers to the wider integration of these circular economy principles in the mainstream fashion industry are industry reticence to use sustainable techniques and restrictions on designers to make sustainable and ethical decisions affecting the supply chain as highlighted by informants in Section 5.2 of Chapter 5. Circular economy designers must be given the agency to make sustainable design choices that affect the whole supply chain, from materials selection and sourcing, to fair trade production, product longevity and durability and consideration for user-phase impacts such as laundry, repair and eventual divestment. In order to do this, fashion designers must be able to communicate their design specifications with textile designers, and also be aware of the available textiles on offer to meet those needs. Equally communication and information flows must exist between textile manufacturers and apparel producers to enable products to be made from the most appropriate materials, and between designers and

manufacturers to ensure supply chain sustainability. As established in Section 5.3.2 of Chapter 5, a designer's role within a large mainstream company rarely extends beyond research and design, limiting the ability of the design stage to implement sustainable strategies (such as 'design for the environment' and 'design for sustainability', as described in Section 2.2.5 of Chapter 2) throughout the entire supply chain. This is modelled as communication feedback loops within the design stage on the framework in Figure 59, and between design and manufacture. Information from users and retailers also flows into the design stage in Figure 59, to inform further design decisions and enable evaluation of the design process as it affects downstream use-phase stages.

7.1.4 Manufacture / Remanufacture

Global production has resulted in frequent exploitation of workers' rights, environmental degradation and high levels of waste (Allwood et al., 2006; Kim and Hong, 2011). Fashion and textile products are known to be amongst those produced under modern slavery conditions, yet artisan activity also accounts for over £22 billion annually (Global Slavery Index, 2014; Alliance for Artisan Enterprise, 2015). Environmentally, production contributes over three-quarters of the carbon impact, 90% of the water footprint and one third of the waste footprint of garment consumption. If clothing were to be kept in productive use for a third longer than through current practices, each of these footprints would be reduced by more than 20% (Gracey and Moon, 2012). Circular economy fashion has the opportunity to empower garment workers and artisans to access fair trade, living wages and safe working conditions. To mitigate the effect of environmental degradation and waste, sustainability needs to be considered throughout the design and production schedule and in all supply chain and management decisions, through to end-of-life considerations (Caniato et al., 2012). An example of a brand making such considerations and effectively communicating them is t-shirt company Rapanui. Online traceability maps allow customers to track the source of their products from the organic cotton farm, to the wind powered factory in India, before shipping to Rapanui's Isle of Wight UK base. The UK and India pay breakdown are also included on the company website, showing fair wages above legal minimums and decent working conditions throughout the supply chain. Care labels provide information on reducing impacts from laundry and it is free for customers to return their end-of-life garments for reuse and recycling (Rapanui, 2017).

Upcycled fashion production makes use of modular manufacturing techniques which affords workers a high degree of autonomy and improved skills, resulting in greater worker satisfaction (Han et al., 2016). This style of production also offers increased flexibility to make use of scarce or inconsistent material supply. Although labour intensive in nature, upcycled fashion

production offers scope for an increased provision of employment and training in the garment industry, as discussed in Section 5.3.3 of Chapter 5. The impacts of circular economy fashion manufacturing will be determined by design stage decisions to use sustainable techniques and sourcing, plus fair trade and labour guided by ethical principles. The manufacture / remanufacture stage of the framework is shown as being directly linked into by design / redesign / upcycling decisions in the previous stage. Waste from manufacture and remanufacture feed back into recycling. Post-consumer textiles also feed into the manufacture and remanufacture stage, as upcycled fashion production is shown to source continuously throughout the design and production schedule in Section 5.2.1.1 of Chapter 5. Designers are required to spend significant amounts of time researching where materials will be available, how suitable they are for designs and how much is available. This stage of research must occur before initial sourcing, to obtain the right fabrics needed for manufacturing to commence.

7.1.5 Retail

In 2012 UK shoppers spent £44 billion on new clothing (~£1,700 per household) (Gracey and Moon, 2012), however, identifying the most effective retail strategy for sustainable fashion has been an on-going challenge to the industry. Limited understanding from UK based retail buyers regarding the variability of upcycled stock and fears of inconsistency and poor quality have also presented barriers to wider acceptance and retailing as detailed in Section 5.2.1 of Chapter 5. Barriers to wider retailing include sourcing solely from one stream, such as post-consumer textiles. Brands utilising a variety of sources such as pre- and post-consumer textiles, recycled textiles and sustainably sourced fabrics have shown more success in scaling up their operations for wholesale supply. A constant process of open dialogue and feedback between suppliers, designers, producers, makers, retail buyers, consumers, users and those dealing with the use-phase and end-of-life stages is vital to share information essential to the development of a successful circular economy fashion industry. As detailed by informants throughout Chapter 6, feedback from customers through online and in-store dialogue was essential to facilitating an understanding of sustainable product offerings. The two way dialogue also enabled designers to incorporate customer feedback, preferences and recommendations into the development of products, creating better designed items with lasting value. Two way communication channels between all stakeholders enables transparent communication of supply chain traceability information, which has multiple benefits of creating authentic and trustworthy products and keeping all parties involved in the sustainable practice carried out by producers (Bly et al., 2015; Zane et al., 2015). Sustainable fashion brand Honest By are a leading example of transparency and traceability, providing full information on the materials, suppliers, manufacturers and cost break downs throughout the entire supply chain for each garment sold on their website (Honest by, 2017). Such a strategy

enables a fuller understanding of the higher prices associated with sustainable fashion by providing a full cost break down of the pricing system including individual material costs, manufacturing costs, wholesale and retail mark ups, and details what each of these costs cover for those customers who wish to see this information.

Further barriers were presented in identifying the target market and consumer preferences. Findings established that online shopping was the most widely preferred method. Younger respondents favoured the high street, in particular shops such as H&M and Primark as shown in Section 6.5 of Chapter 6. Older respondents favoured Marks and Spencer and the majority of respondents indicated they had a high frequency of purchasing. Engaging consumers who have expressed a high rate of consumption and preference for mainstream and high street brands will require a circular economy strategy that combines sustainability with high turnover fashion in more cyclical methods of production, consumption and divestment. Preferences for online retail are an indication for circular economy fashion to synchronise internet based methods of retail with web based promotion, in order to engage customers in the ethos and lifestyle of sustainable fashion. Established high street retailers are able to offer customers the implicit sustainability that consumers expect brands to have considered on their behalf. Retailers could fully engage consumers with circularity by offering collection, resale, reuse, rental and repair options. Rentez-Vous are a company that combine elements of high turnover fashion, design brands and online shopping through a web based peer-to-peer and designer clothing rental service (rentez-vous.com, 2017). Through this collaborative consumption strategy, users are able engage with an alternative form of retail which does not rely on the production of newly made clothing and seeks to extend the useful life of pre-existing garments. The retail stage in the framework is shown in material feedback loops with the use phase, collection, reuse and repair stages to illustrate cascading reuse and resale options, which also include rental as part of the retail stage.

7.1.6 Use

Garment user impacts on a circular economy fashion system include laundry practices, repair and reuse routes plus disposal and divestment preferences. 60% of the energy profile used in the lifecycle of a standard cotton t-shirt is during the use phase, in which the garment is washed, dried and ironed. Up to a 50% reduction in the global climate change impact of a garment can be made by eliminating tumble drying and ironing and washing a lower temperature (Allwood et al., 2006). Findings regarding disposal and divestment in Section 6.7.2 of Chapter 6 indicate that 60% of respondents base their treatment of old clothes and textiles on learnt behaviours from their family and home life while growing up, and 37% from talking with friends and family. This indicates that shared participatory experiences for families

and social groups would be the most effective strategy to engage individuals with responsible garment divestment options. Preferences were also expressed for online communication channels such as social media and websites. Respondents reported dealing with worn out garments by recycling them at home as rags, taking them to a recycling bank or binning them in Section 6.7.1 of Chapter 6. Socks and underwear were routinely disposed of in to the bin and it is assumed that items made into rags at home would also end up in the municipal waste stream. Respondents perceived these worn, soiled and damaged textiles as having no value and felt that disposal was the most appropriate option. Provision for consumers to donate low grade textile items for mechanical and chemical recycling purposes separately to higher quality items is needed as part of a circular economy fashion and textiles system. A system which collects items unsuitable for reuse could also handle non-clothing textile items such as bedding, towels and furnishing fabrics. Locating collection services for low grade textiles in municipal and residential waste sites would offer the greatest convenience to consumers. Clear communication to consumers would be required on how to use the services and what the benefits would be. The use phase in the framework is shown as being directly fed into and influenced by retail, before linking to a material feedback loop of collection and reuse, and optional repair.

7.1.7 Collection

Collection of used textiles is a key stage in the circular economy fashion system as end-of-life clothes and textiles are returned and processed for reuse, recycling and resale. Recovering the 350,000 tonnes of clothing sent to landfill each year could generate up to £140 million if recycled or reused (Gracey and Moon, 2012). Main routes for collection include textile banks, charity shops, door-to-door collections and cash for clothes shops. Findings in Section 4.3.1 of Chapter 4 indicate that textile banks are the most widely used form of collection for commercial collectors, however charity shops are the most widely used method of donation for consumers (Gracey and Moon, 2012; Bartlett et al., 2013). Making use of all four methods of collection offers a wide range of donation options to consumers and serves to divert the greatest volume possible from municipal waste streams. Textile bank collections were found to be of good quality for reuse purposes. Collection prices for this source have fallen, resulting in more consistent value from collected volumes. As indicated in Sections 6.3.10 and 6.7. 1 of Chapter 6, convenience and charitable concerns are major influencing factors for donation behaviour. Regarding the quality of collections, Section 4.3.1 of Chapter 4 highlights findings that door-to-door and cash for clothes collections from retail and residential locations were often of the best quality, and bank collections from municipal waste sites of the greatest volume, indicating the location of collection services is important as part of a strategic approach.

As discussed in Section 4.3 of Chapter 4, charity shop collections of unsold stock were found to be of lower quality as better quality items had been sold in the shops prior to collection, however collection prices for this source had also fallen, indicating collected volumes to be of value for resale. Door-to-door collections were found to be of best quality and a new appointment based collection service currently being used by TRAID may prove to be an effective strategy to target the highest quality fraction of unwanted items. Cash for clothes shops yield collections of variable quality dependent on location but offer financial benefits for consumers looking to resell their unwanted items. Seasonal patterns reported by the case study findings indicate that collections are busy in summer and quiet during winter. An opportunity is presented to promote new strategies of collection such as retailer take back schemes or donation banks when collection through standard means is at its quietest time of year, such as during winter. Combining this with a charity association would yield better quality collections and also raise money for good causes. An example of this may be to raise money and collect warm clothing for the homeless during winter. Locating collection services such as donation banks or take back schemes within a retail environment would work to target younger consumer groups who expressed a preference for frequenting retail locations for leisure and social shopping.

A collection plan which operates as part of a circular economy fashion and textile system is able to take these findings into consideration as part of a strategic approach and to divert the greatest volume possible from municipal waste streams. The following elements comprise the proposed strategy:

- Utilise and accept many methods of collection (door-to-door services, textile banks, cash for clothes shops, charity shops, retailer take-back schemes, clothes swaps).
- Increase numbers of textile banks available to donators.
- Locate textile banks and collection services in convenient residential and retail locations, no more than 10 minutes from each residence or retail location served by the bank.
- Link textile banks and collection services to charitable causes.
- Use chute opening textile banks to avoid theft and safety issues.
- Locate separate textile banks to collect low grade textiles in municipal, local authority and residential waste sites.

- Utilise a targeted and effective communication strategy to provide individuals with information regarding each form of textile collection available.
- Encourage individuals to pre-sort and separate higher quality textile from low grade items before donation.
- Trial new collection strategies, locations and methods such as appointment based residential collection, fashion retail sites and internet based communication campaigns.

This stage in the framework relates directly to the business model for 'Post-Consumer Textile Collection for a Circular Economy', outlined in Section 2.3.1 of Chapter 2. As highlighted in Chapter 2, the system must necessarily be supplied from a wide range of sources in order to provide the greatest number of options to donators and divert the largest volume of textiles from the waste stream. As shown in Section 4.2.4 of Chapter 4, sales for domestic reuse do not amount to more than 20% at present, so it is imperative that business innovations are developed to create more value in the industry. Targeting new consumers through multi channel innovations such as the 'Style Me in Second' social media campaign highlighted in Section 2.3.1 of Chapter 2 directly targets key preferences expressed by younger shoppers in Chapter 6, such as shopping for leisure, style and price motivations, social sharing and internet based channels of information.

In terms of costs, financial resources for a collection and sorting plant must also include credit lines for clients who cannot pay for more than 50% upfront, as detailed in Section 4.2.4 of Chapter 4. As detailed in Section 2.3.1 of Chapter 2, fixed costs include salaries, rent and sorting plant facilities and variable costs include collection costs, plus overhead costs such as energy use, wages and distributions. These costs are subject to seasonal and economic fluctuations, as shown in Section 4.3.3 of Chapter 4; however partnerships to enable a broader scope for collection and sales in the circular economy will enable access to new markets and more consistent supply.

The collection stage in the framework is fed into by material flows from the use phase, and links back into the processing loops of recycling, material production and sourcing, design, redesign and upcycling and the use phase loops of reuse and repair, illustrating how the collection of post-consumer textiles has cascading cycles of material flow. Two way feedback loops of information and communication exist between the collection stage and retail, use, re-use, repair, recycling, manufacture and material production and sourcing to enable the most effective utilisation of this resource.

7.1.8 Reuse

Reuse options in a circular economy fashion and textile system include domestic resale markets, international export markets and peer-to-peer and community exchange programmes. Domestic reuse options include vintage and second-hand charity resale which findings in Section 4.2.4 of Chapter 4 indicate ~20% or less of collections are used for. Vintage resale can revalue to items to a comparable value to newly made items and charity retail has the added benefit of raising funds for good causes. For circular economy fashion retailers implementing a programme for used garment donation, Buttle et al. (2013) modelled a business scenario for a retailers own brand 'pre-owned' collection. This model provided a payback in just 2.3 years with an operating profit margin of 28%, and proved to be one of the most effective at generating waste savings over the long term (Buttle et al., 2013).

International export markets for the case study companies were located in Africa, Europe and Asia, although falling sales prices have led to fluctuations in profit and loss. Political and economic uncertainty in export markets such as Ukraine and Lithuania have created further instability. Unseasonal climate conditions and economic austerity have led to low collection volumes, which in combination with low value from export sales have created uncertain profitability in export markets. A risk is presented that low grade items could be diverted to landfill if no value is found in reuse and resale options. Collection optimisation strategies such as increased provision and targeted communications are needed in order to maintain the reuse option. A wider range of sustainable end markets, such as domestic reuse and fibre-to-fibre markets for low grade textiles that are unsuitable for re-use are also needed as part of a circular economy fashion and textile system (WRAP, 2016c).

Non-commercial reuse options have the potential to divert clothes and textiles from the waste stream through peer-to-peer and community exchange programmes. Clothes swaps function as social peer-to-peer exchange events that serve multiple purposes as social occasions, opportunities for responsible divestment and information exchanges on sustainable consumption behaviour (Albinsson and Perera, 2012). Over 40% of respondents expressed an interest in attending a clothes swap, despite not having been to one before, and 20% indicated that they had been to one, and would attend again as shown in Section 6.3.1 of Chapter 6. Significant quantities of re-useable items are also left behind at swaps and donated to charity (Albinsson and Perera, 2009), corresponding to the higher quality fraction of clothing suitable for reuse that collectors are currently most able to utilise in a circular economy system. Multiple reuse option exist as part a circular economy fashion and textile system, from commercial reuse markets to community non-profit exchanges, these strategies all serve to divert clothes and textiles from the waste stream and keep them in productive and / or

profitable use for longer. The reuse phase of the framework is directly fed by used textile collection and links back to use phase loops of use, repair and retail.

7.1.9 Repair

Mending, repair and customisation strategies for are necessary as part of a circular economy fashion system to keep clothing and textiles in productive use for longer and out of municipal waste streams. Around 1.7 billion items of clothing (~30% of all clothes) are left unworn in the homes of individuals, and ~19% of the population could bring over half of their unworn back into use if they were repaired, representing ~166 million items of clothing (Gracey and Moon, 2012). An example of a circular economy garment retailer successfully offering a repair service is outdoor clothing company Patagonia. Patagonia provide customers of their recycled polyester wetsuits with a guarantee to repair anything that fails under normal use without charging and also provide a service for non-warranty wet suit repairs (Patagonia, 2017) (Figure 58). These services mean that their original wetsuit product can be kept in productive use for longer, preventing waste and reducing consumption. Outdoor clothing company Páramo specifically design garments that are constructed for repair, and run a service to mend items and replace panels when needed. Páramo products have a lifetime guarantee, however the company also operates a scheme to take-back, reuse, resell and recycle items (Páramo, 2016). This ensures that items produced stay in use for longer and that the materials used can also remain useful when they reach the end-of-life stage. Government backing for repair services would also work to reduce the environmental impact of consumption and provide support for localised services. Towards the end of 2016, Sweden announced tax breaks on repairs to clothes, bicycles, fridges and washing machines, balanced by increased taxes on new white goods containing harmful chemicals. It is hoped that the move will encourage individuals to buy better quality items and create more localised jobs in repair and servicing. (Starrit, 2016).

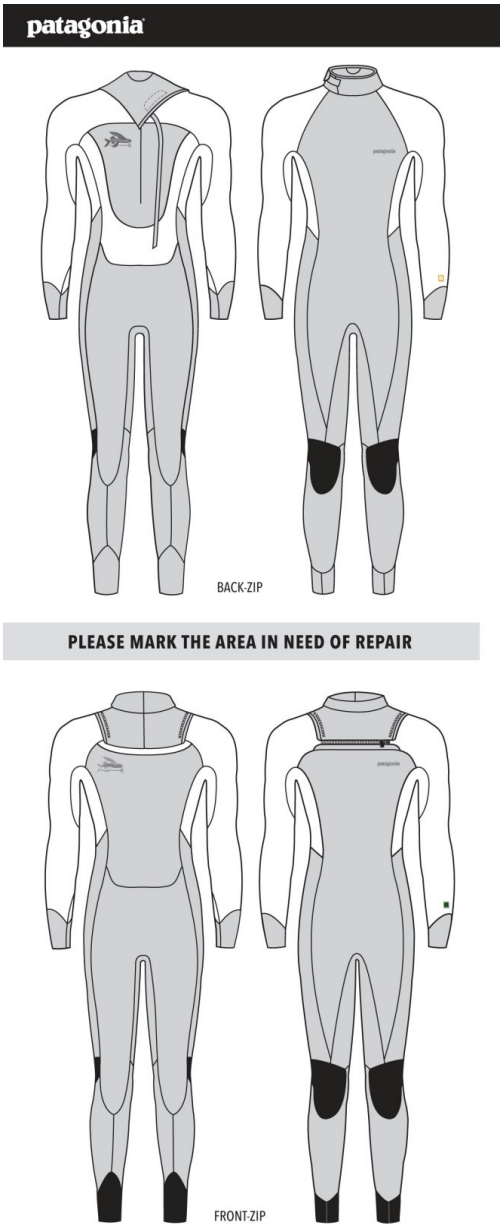


Figure 58. Patagonia's Wetsuit Repair Service

Although Patagonia have displayed a successful strategy for the repair of specialist items such as their wetsuits and waders (Patagonia, 2017), repair services in a circular economy fashion system have the greatest potential for effectiveness when enabling individuals to carry out their own repairs and alterations. WRAP found that almost a third of the population would bring unused items back into use with the necessary time and skills for repair and alternations (Gracey and Moon, 2012). Findings in Section 6.3.5 of Chapter 6 indicated that respondents in the two lowest income groups were the most likely to customise, mend or alter clothes they were bored of. Providing informal education services to those in low income communities, but accessible to all would enable individuals to repair and alter their own clothes in order to keep more items out of the waste stream. The most commonly cited barriers to clothing repair were

cost, time and skills. Providing facilitated, social and participatory repair events and online resources to support the exchange of skills and knowledge connected to mending and repair would not only enable individuals to repair their own clothes but would also provide a social platform on which to engage participants on issues connected to sustainable consumption (McLaren and McLauchlan, 2015). The repair stage of the framework is fed into by used textile collection and reuse, before material flows back to reuse or retail, or eventual recycling when reuse options are no longer viable. This enables items to be collected for reuse or repair purposes, before being returned to retail, reuse and use phases for the maximum amount of productive use. The communication of repair services has two way flows between retail, use, reuse, collection and recycling so that information on the availability of services reaches individuals able to make use this knowledge to extend the life of their products.

7.1.10 Recycling

The recycling stage of the conceptual framework for a circular economy returns clothing and textiles from each previous stage in the cycle to raw materials and new products. For clothes and textiles unsuitable for reuse, recycling into new fibres, feedstocks, materials and products ensures full circularity. Michaud et al. (2010) broadly categorise three types of textile recycling: wiper production, fibre materials and respun fibres made into new fabric products. The process of converting post-consumer textiles into wipers involves removing any metallic parts such as zips, before cutting into the relevant size for sale to industry. Although over 21,000 tonnes of collected textiles were sent to wiper production in 2010, an 83% decline in market value was experienced between 1990 and 2009. Whilst a viable market at present there is limited opportunity for growth. (Bartlett et al., 2013). The environmental benefits from wiper production as a form of textile recycling stem from the replacement of virgin materials such as cotton cloths or paper, however limited demand for recycled wiping clothes necessitates the development of alternative routes for these materials (Michaud et al., 2010).

Post-consumer and pre-consumer textiles can also be used as feedstock in the production of fibres for filling materials such as flocking, insulation and nonwovens, and in the production of shoddy fibres for recycled yarns (Bartlett et al., 2013). For these purposes, textiles are recycled mechanically in processes which cut and shred fabrics into fibres which can then be respun into yarn or made into nonwoven textiles (Payne, 2015). Flocking is comprised of shredded textiles combined with wool to create a fire retardant product, and is used for filling in mattresses and furnishings. Although the market for flocking is in decline, demand is still strong as local sourcing is more competitive due to transport logistics and high import costs (Bartlett et al., 2013). Nonwovens are created from bonded layers of shredded textile fibres and used for purposes such as insulation and carpet underlay. For nonwovens, ease of

processing and quality is determined by the grade of the textile feedstock (Bartlett et al., 2013). These forms of physical and mechanical textile recycling can be classified as open-loop systems, in which products are broken down to be used in a secondary and unrelated product system. Material savings can be made at this stage by replacing virgin materials, however often no provision is made for re-collecting these materials at their second end-of-life stage, and were these items to be collected, continual reprocessing would degrade the quality materials beyond usefulness (Payne, 2015).

A closed-loop system returns materials to the same production chain in which they originated, such as post-consumer apparel re-entering the garment supply chain through reuse or recycling (Payne, 2015). Both post-consumer and pre-consumer textiles can be mechanically recycled into fibres, used to produce new yarns and fabrics, and made into clothes, blankets or knitted products. Shorter fibre lengths result in poorer quality textiles and it is necessary to combine the recycled fibres with new to achieve the required properties (Bartlett et al., 2013). Technical closed-loop fibre recycling refers to synthetic polymer products such as polyester, nylon and acrylic which will not only be recycled but recyclable in the same production chain for multiple cycles (Payne, 2015). Processing these synthetic materials involves chemically breaking down the fibres, before repolymerisation and extrusion as a new fibre, and spinning into yarn for woven or knitted fabric production. As polymers degrade with each recycling, a challenge has been presented to the industry to produce fibres with equivalent or better quality to virgin materials (Payne, 2015) and utilise a process which creates more carbon savings through recycling than the energy burden to recycle the materials in the first instance. Findings in Section 4.3.2 of Chapter 4 indicate that the sorting and grading process for collected textiles yields an unavoidable waste fraction of low grade textiles, unsuitable for reuse. Currently no markets are established for these items; however an opportunity exists to divert these textiles for use as feedstock in innovative chemical recycling processes currently in development.

The EU Resyntex Project (Resyntex, 2015) aims to create a complete reprocessing line to transform textile waste into secondary raw materials for the textile and chemical industries. The Resyntex process uses biochemical processing to recycle cotton, polyamide, polyester and wool into PET monomers for PET production, glucose for bioethanol, protein hydrolysate for resins and adhesives and polyamide oligomers for the chemical industry. Worn Again (wornagain.info, 2015) are a circular economy textile brand who aim to recapture polyester and cellulose from pure and blended textiles. The Worn Again process uses post-consumer textile feedstock to produce PET chips and cellulosic outputs that could be re-spun into like new fibres. A complimentary recycling strategy to these material reprocessing stages is ‘Design for Cyclability’ (Politowicz, 2013). Through this design strategy, the initial process anticipates the potential for eventual recycling and considers existing garments and products

as ‘raw materials’. In illustration of this principle, a short-life duration prototype product was created from paper based non-woven textile for closed loop material recovery by Kay Politowicz and Sandy MacLennan. This ‘disposable fashion’ product shows how circular economy fashion could operate at both ‘fast’ and ‘slow’ fashion speeds, to appeal to consumer demand for short-life trend pieces. While the paper based prototype is an extreme example of a single use garment, the vast quantities of PET currently in circulation and high demand for fashion products indicate that the wider use and collection of repeatedly recyclable fashion items could work to create the implicit sustainability that consumers expect from retailers and brand through a line of high trend recycled polyester garments. The recycling stage of the framework incorporates both chemical and mechanical textile recycling processes, as detailed in this Section. Whilst these processes are distinct and separate, the feedstocks which supply both processes originate from the same points in the framework; namely post-consumer textiles and manufacturing. The recycling stage enables the circular economy fashion and textiles systems to fully utilise all sources of textile waste as raw materials and in material production and sourcing.

7.1.11 Communication

Feedback loops for material flows are modelled in Figure 57, however as communication and information flows are a vital part of a circular economy fashion and textiles system, these have been modelled separately in Figure 59 to show how these link the various stages established as part of the framework. Information on pre-consumer stages such as materials and manufacture are linked to retail and use phase stages. This will ensure that traceability in the supply chain is communicated to all stakeholders with transparency, enabling responsible decision making and conscientious consumption. Information on post-consumer stages such as collection and repair are also linked to use phase stages. This will facilitate maintenance and reuse to prolong the useful life of clothing, and responsible divestment to ensure full circularity for unwanted items. As shown in Figure 60, a fashion communication strategy for the circular economy requires relevant market research to identify the target audience in order to communicate a clear, multi-channel message which coherent values and compelling products. Findings in Section 5.2.3 of Chapter 5 indicate that often, brands and designers operating in the circular economy lack the necessary resources to dedicate to promotion and access relevant market knowledge, also confirmed by (Sinha et al., 2016). Brands are at risk of inducing guilt in consumers by inexpertly communicating sustainability principles in judgemental or accusatory ways. This is further compounded by the mainstream media’s limited coverage and understanding of sustainable fashion offerings.

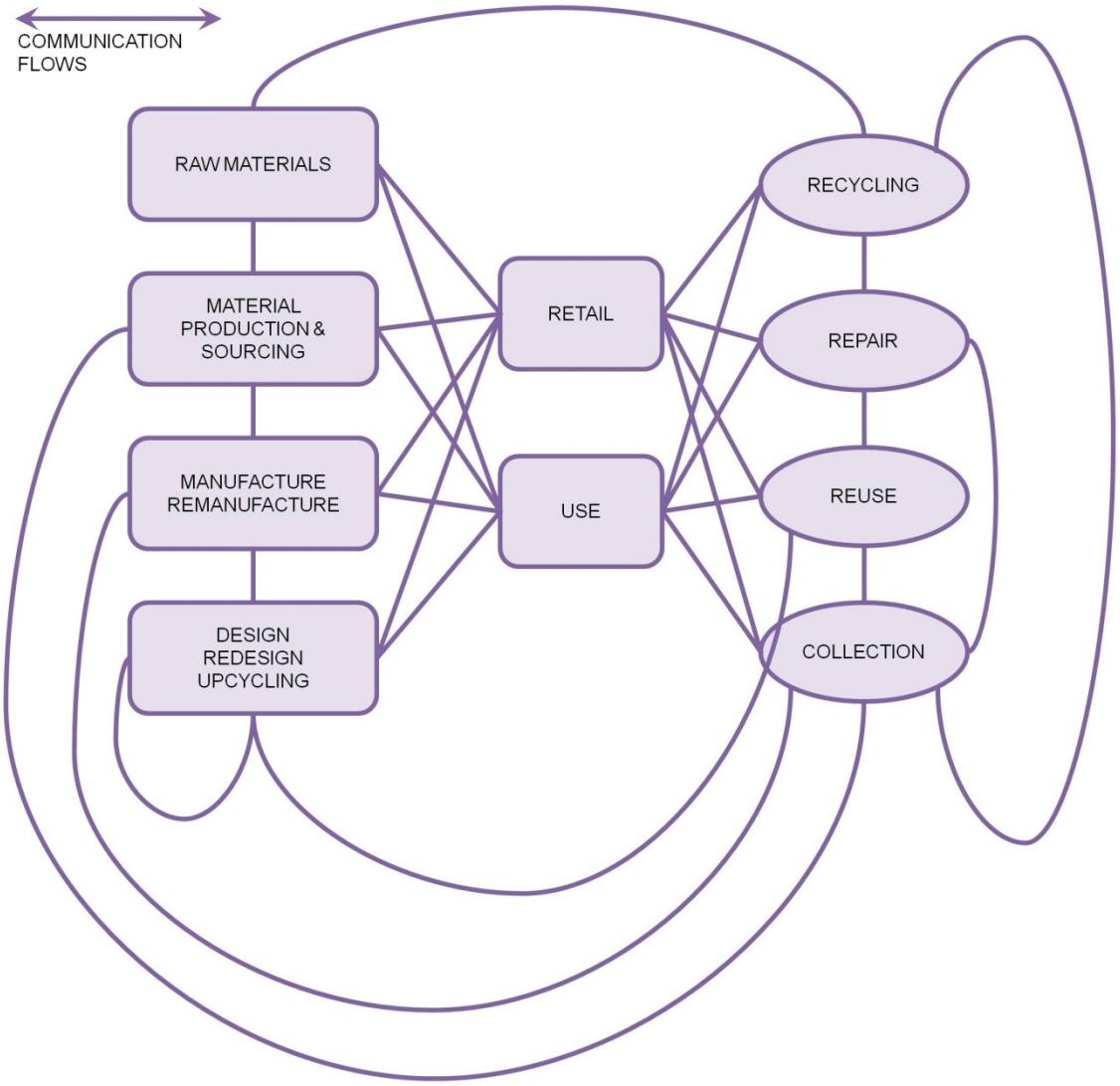


Figure 59. Communication Flows for Circular Economy Fashion

Collaborations with larger organisations and academic institutions can enable brands to access market intelligence and strategic planning resources, and consumer preferences for online channels of communication detailed in Section 6.4.5 of Chapter 6 present opportunities to engage with individuals on their own terms. Findings in Chapter 6 reveal that social interaction plus home and family life are the preferred methods of information exchange for respondents. Younger respondents are motivated by style and price regarding fashion, whereas respondents over 35 are likely to be more responsive to personal style and well-being regarding sustainable fashion. Young consumers are important as opinion leaders and fashion followers; however the majority of respondents signified that they expected ethical and environmental choices to be made on their behalf by brands and retailers.

The **'Communication'** stage relates directly to the business model for 'A Circular Fashion Brand', as outlined in Section 2.3.2 of Chapter 2. A successful communication strategy

identifies the audience to target and a multichannel approach to adopt. Customer segments identified by findings in Section 6.7.3 of Chapter 6 indicate that two distinct groups exist. Those aged 18 to 34 prefer to shop on the high street, shop more frequently, are drawn to trends and newness and are motivated by style and price. Online shopping was popular for all age groups, but most especially so for the 35 to 44 age group as shown in Section 6.5.1 of Chapter 6. The 35 to 44 age group were also the most concerned about ethical and environmental issues, were put off by excessive advertising and were the most likely to use a textile recycling bank. As the over 35 age groups exhibited a lack of concern for trends and shopping as a leisure activity, it is recommended that connecting with this group regarding well-being and personal style aspects of sustainable fashion would create a more appealing and authentic message (Bly et al., 2015). Value propositions that target both the under 35 and over 35 age groups will need to create trend led, competitively priced, high turnover styles with full recyclability and take-back provision, and design led, high quality pieces that connect through flattering, fashion forward styles alongside transparency and traceability. In terms of communication channels, online sources were shown to be the most popular choice for information on clothes and fashion in Section 6.7.2 of Chapter 6, and provide the main channel of communication for circular fashion, enabling the brand to communicate with individuals through socially engaged online networks.

As established under the '**Retail**' heading, it is important for those operating in circular economy fashion to be as open and clear regarding the ethics, sustainability and traceability in their supply chain to all consumers, and have a full understanding of how the flows and feedback loops of information and communication relate to each stage in a circular economy fashion and textile system, as highlighted in Section 2.4.5 of Chapter 2. As under the '**Design / Redesign / Upcycling**' heading, communication between all stakeholders, (such as between fashion designers, apparel manufacturers, textile designers and fabric suppliers), enables design decisions to be made at the start of the supply chain which affect sustainability downstream. As established by Sinha (2002) and Han et al. (2016), designers often are not given the agency to make decisions outside of their remit. However, to engage with the material feedback loops of the circular economy framework utilising the sustainable design strategies covered in Section 2.2.7 of Chapter 2, it is essential that the role of designers in the circular economy becomes broader and more centralised, as shown in Gwilt's (2011) model linking sustainable strategies with design and production, Figure 8 in Section 2.2.6 of Chapter 2. In this way, the industrial practices and supply chain activities of fashion companies can be authentically communicated to consumers, and all stakeholders are able to participate in the shared accountability (Zane et al., 2015), which survey results in Section 6.7.4 of Chapter 6 indicate respondents expect brands and retailers to have taken care of on their behalf.

7.2 A Communication Strategy for Circular Economy Fashion and Textiles

Empirical evidence from the textile collection case studies, key informant interviews and consumer survey, plus key insights from literature regarding fashion communication, the circular economy and sustainable fashion were synthesised to establish the critical dimensions necessary for an effective communication strategy in the circular economy fashion and textiles industry. Thematic analysis revealed eight key elements deemed necessary for effective fashion communication and circular economy best practice, which would facilitate positive decision making for all stakeholders, as shown in Figure 60. These elements are broadly confirmed as the necessary requirements for communication by marketing literature, such as that covered in Section 2.4.3 of Chapter 2. A strategic application of these elements informed by sustainability practice creates an exemplary approach for circular economy fashion and textiles communication that differentiates these dimensions from generic marketing strategy.

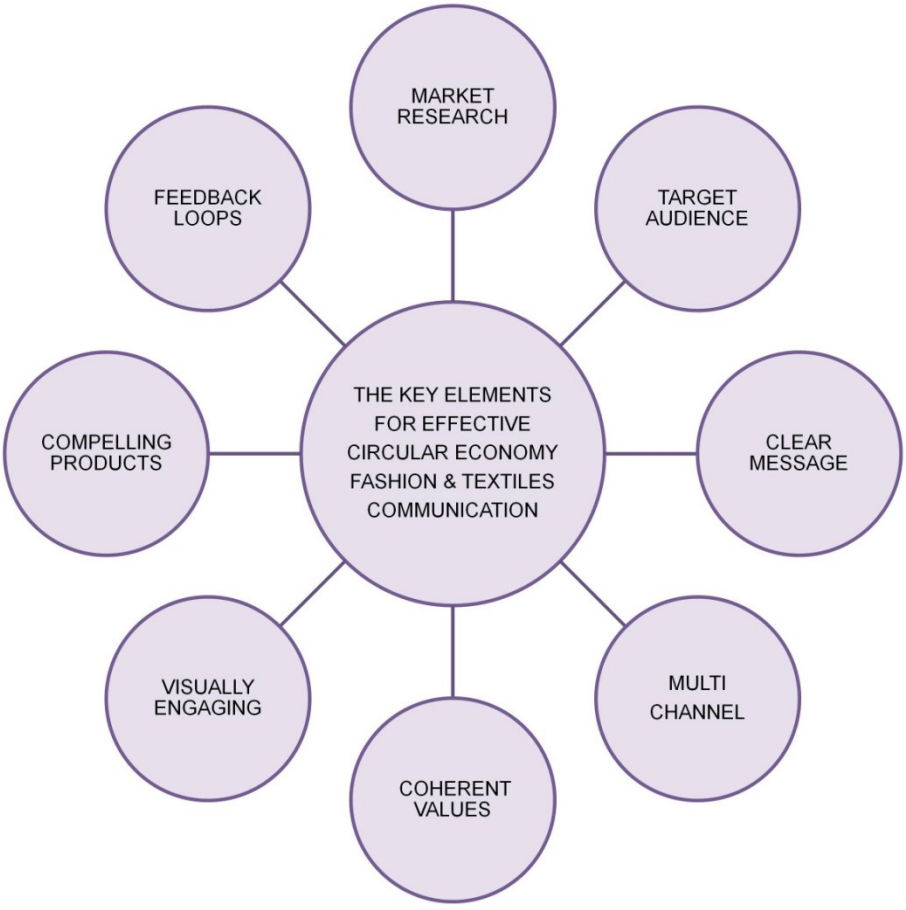


Figure 60. The Key Elements for Effective Circular Economy Fashion Communication

7.2.1 Application of the Circular Economy Fashion Communication Strategy

For effective communication, messages should be under-pinned by relevant market research to identify the intended audience and most effective forms of transmission, as established in Section 5.2.3 and Section 5.3.2 of Chapter 5. Short, creative messages, delivered through a wide variety of media, often using highly engaging visual or non-verbal forms target the predetermined audience (Solomon and Rabolt, 2004). As established in Section 2.4.3 of Chapter 2, a communication model comprises of a sender, message, channel, receiver and feedback loop. Utilising this strategy, fashion communication must consider; who the message is for, how the message should be constructed, what it is about, where the message will be transmitted, why it is relevant to the targeted consumers and when should it be delivered (Solomon and Rabolt, 2004; Moore, 2012). Table 21 and Table 22 demonstrate how the Circular Economy Fashion Communication Strategy is applied. Each element of the communication strategy is analysed in terms of its current implications for the circular economy.

7.2.2 Circular Economy Fashion Communication Strategy Elements in Focus

In mainstream and value fashion, promotional messages encourage hyper-consumption through a high turnover of new product lines. For sustainable and circular economy fashion, a paradoxical challenge arises in conveying a message, which aims to reduce consumption impacts and change consumer behaviour, yet also sell more products at the right price for the target market (Black, 2011). Circular economy fashion communication aims to nurture relationships between consumers and producers and encourage responsible consumption choices which make use of products designed with long-lasting value and enduring style (Fletcher, 2008; Cooper et al., 2013). Personal style and creativity is emphasised, in which non-purchase related lifestyle choices offer greater versatility, inventiveness and personalisation through practices such as mending, customising and swapping (Busch, 2008). Information about company supply chains, ethics, and sustainability ethos must be communicated in a clear, accessible and coherent manner as an integral part of each brands' communication strategy, in a way which connects and is relevant to consumers, as discussed in Section 6.7.4 of Chapter 6. It is in this departure of intended outcomes where mainstream strategies and those of the circular economy begin to deviate. Circular economy fashion brands operate less impactfully than their mainstream rivals, and must combine this message with a compelling presentation of well-designed and desirable products.

Table 21. Application of the Circular Economy Fashion Communication Strategy (1)

	COMMUNICATION STRATEGY – APPLIED			
CIRCULAR ECONOMY COMMUNICATION ELEMENTS	**SENDER →** Who is the message from? Stakeholder / Industry sector / group… Friends, family, other people…	**MESSAGE →** How should the message be constructed? Visual or non-verbal? What is it about?	**CHANNEL →** Where and how will the message be transmitted? When should it be delivered?	**RECEIVER →** Who is the message for? Why is it relevant to the target audience?
MARKET RESEARCH	**From: COLLECTION** I&G Cohen - A Salford based textile collection company.	Custom made bales of sorted textile, created to export clients' own specifications.	Direct and personal communication between the sales and business development department at I&G Cohen and export clients of the company.	**To: REUSE – RETAIL** Overseas export clients purchasing bales of pre-sorted clothing and textiles from the UK.
TARGET AUDIENCE	**From: DESIGN – RETAIL** The Reformation - a trend led sustainable fashion brand.	Celebrity endorsement / customers such as model Karlie Kloss and singers Rihanna and Taylor Swift. Photographs of celebrities wearing the sustainable fashion clothing for sale.	Online and print media.	**To: REUSE – USE** Younger, fashion leaders who are drawn to celebrities and fashion media.
CLEAR MESSAGE	**From: MATERIALS – MANUFACTURE** Eileen Fisher - a sustainable fashion brand.	Traceability information on the company's production and supply chain. The information presented is clear and free from confusing terminology, presenting a trustworthy and authentic message.	Online, through the company's e-commerce site. This include options to click through to find out more information about factories, materials and certifications.	**To: RETAIL – USE** Online customers and website users.
MULTICHANNEL	**From: DESIGN – RETAIL** H&M - a global high street fashion brand.	A convincing image of a brand working towards incorporating circular economy values into their current business model. High profile campaigns such the music video collaboration with musician M.I.A. for World Recycle Week (H&M, 2017).	In-store, print media and editorial, and online - utilising a website, social media and a YouTube channel.	**To: USE - REUSE – RECYCLING** Consumers who have come to expect rapidly evolving and socially engaging forms of communication. 18 to 34 years female fashion consumers, led by style and price.

Table 22. Application of the Circular Economy Fashion Communication Strategy (2)

	COMMUNICATION STRATEGY – APPLIED			
CIRCULAR ECONOMY COMMUNICATION ELEMENTS	**SENDER →** Who is the message from? Stakeholder / Industry sector / group… Friends, family, other people…	**MESSAGE →** How should the message be constructed? Visual or non-verbal? What is it about?	**CHANNEL →** Where and how will the message be transmitted? When should it be delivered?	**RECEIVER →** Who is the message for? Why is it relevant to the target audience?
COHERENT VALUES	From: MATERIALS – MANUFACTURE Tom Cridland - a circular economy clothing brand.	T-shirts, sweatshirts, trousers and jackets guaranteed for 30 years. The brand also offers free repairs and tailoring for the first 30 years of each garments lifetime. The combination of clarity and coherent values, plus guarantee of durability work to effectively communicate a message of authenticity in reducing the level of consumption.	Online information on the brand website communicates how products are made from high quality materials such as organic cotton, wool and cashmere, and are constructed using techniques to prevent shrinkage, pilling and excessive wear.	To: USE – REPAIR Fashion consumers demanding quality and longevity from the products.
VISUALLY ENGAGING	From: DESIGN & UPCYCLING Goodone - a design led sustainable clothing and upcycling brand.	Design led, fashion forward garments, modelled in styled images and product shots, plus a distinctive style, logo and graphic design approach.	A visually engaging identity, often presented through a strong online presence.	To: RETAIL – USE Fashion consumers driven by style and price, who see ethics as a bonus addition and not the main purchasing driver.
COMPELLING PRODUCTS	From: MATERIALS - MANUFACTURE - DESIGN – RETAIL People Tree - an ethical fashion brand.	An offering of stylish and wearable clothes, able to compete with current high street fashion in style and price, with sustainability and ethics information clearly communicated through their online store.	The brand is sold online through its own website and through popular online fashion retailers ASOS.com, and stocked internationally throughout Europe, America and Japan, demonstrating an effective communication of style and ethics creating a wide appeal.	To: USE Fashion consumers driven by style and price, who see ethics as a bonus addition and not the main purchasing driver.
FEEDBACK LOOPS	From: RETAIL - REUSE – RECYCLING Marks and Spencer - a UK high street brand.	In-store take back of unwanted clothes.	TV advertising, editorial, online and in store.	To: REUSE - RECYCLING – USE Consumers wishing to clear out unwanted clothes.

7.2.3 Market research

Research underpins all key decisions in the communication strategy, and market intelligence such as industry trends, competitor analysis, current issues in the industry and consumer research enables identification of who the intended audience is and what the most effective forms of message transmission are. Many small and micro enterprises in circular economy fashion lack the financial resources necessary for commercial market research, creating a limiting factor at this crucial stage, as shown in Section 5.3.2 of Chapter 5. In order to by pass this barrier, collaborating with larger organisations and academic institutions allows brands to access market intelligence and strategic planning resources to gather more information about their target audience, creating open and effective communication and assisting positive developments into the industry as a whole. Brands and designers aiming to communicate a range to their target market face a challenge not only in dedicating enough resources to identify and understand their audience, but to offer them products at the most appropriate price, quality and style to meet their preferences. Accessing the relevant market knowledge through commercial or collaborative means should enable circular economy companies to understand their market.

As a company from the textile **COLLECTION** sector, communicating directly with clients in the **REUSE** and **RETAIL** sectors, market knowledge of client demands was utilised by I&G Cohen to enable a successful circular economy communications strategy, as shown in c This in-depth market intelligence included an understanding of the reasons behind changing demands, such as global social, political and economic factors. For example, due to political unrest in Ukraine, demand for semi-sorted 'original products' had fallen greatly at the time of the research. This led to a focus on increased sorting to create more specific grades of product (Appendix A, Section 10.1.3, Page 278). The focus is now on collecting from textile banks, to supply demand from Africa, Eastern Europe and Pakistan (Appendix A, Section 10.1.2, Page 276). Decisions on sorting are directly influenced by the current demand and market price for each type of product the company can make. With this knowledge of the market, it is anticipated that in future, the company will sort into increasingly diverse and specialised grades (Appendix A, Section 10.1.3, Page 278).

7.2.4 Target audience

Identification of a clear customer profile in terms of age, preferences, lifestyle choices and motivations will enable those working within circular economy fashion and textiles to target their communications to the right people. Regarding shopping behaviours, the consumer survey results in Section 6.5.1 of Chapter 6 indicated that online shopping was popular across all age groups and that high street shopping was most popular with younger groups. Retailers

frequented included H&M and Primark by younger consumers and Marks and Spencer by older age groups. As shown in Section 6.7.4 of Chapter 6, two distinct audience groups emerged for circular economy fashion. Those aged 18 to 34 years were led by style and price, and had a preference for trend led fashion, high street retailers, online and in person social exchanges and little concern for sustainability issues. These younger consumers displayed the most characteristic fashion leadership properties, such as emotional satisfaction from shopping and are important as opinion leaders who will influence majority fashion followers. In order to appeal to younger individuals it will be necessary for circular fashion to be integrated and adopted alongside mainstream and high street fashion, both online and in stores. Respondents in the over 35 age groups expressed preferences closest to those embodied by circular fashion principles. Those over 35 years old displayed greater concern for ethical and environmental issues and were more likely to search for proof of a garment's ethical credentials. These individuals were less focused on trends and fashion and were put off by excessive advertising messages. Bly et al. (2015) recommend appealing to this group in terms of well-being and personal style in relation to sustainable fashion. Understanding fashion consumer behaviour and motivations will allow circular economy fashion companies to target their message to the right audience. Sustainable fashion brand Reformation, representing the sectors of **DESIGN** and **RETAIL**, display clear knowledge of their youthful target audience who represent the sectors of **USE** and **REUSE**, as shown in Table 21, through their offering of a wide range of regularly updated fashion forward styles (www.thereformation.com, 2017). The brand has also successfully benefited from celebrity appeal and is able to name high profile customers such as model Karlie Kloss and singers Rihanna and Taylor Swift (O'Connor, 2015), demonstrating a successful strategy of appealing to younger, fashion leaders who are drawn to celebrities and fashion media (Morgan and Birtwistle, 2009).]

7.2.5 Clear message

A clear message communicates the company ethos and the key values and attributes this embodies. Blanco-Velo et al. (2010) have shown that consumer understanding of ethical fashion messages is often hindered by overlapping and contradictory messages and statements. Sector influencers do not have a shared language of ethical fashion, resulting in confusion over terms by consumers. The miscommunication of the ethical message in a key inhibitor to the wider acceptance of ethical fashion in the mainstream (Blanco-Velo et al., 2010). Circular economy fashion communication must therefore consider how messages are conveyed and understood in a wider context, and clarity of meaning will be essential to engage the public in sustainability issues. As stated by Jones (2014) clear, concise and appealing messages are essential to building consumer trust. Norton (2014) recommends that companies should include clear messages about traceability with buyers, suppliers and in staff

training. In this way, messages about the company's ethos and the traceability of their supply chain can be understood by all involved and communicated clearly to consumers at the end of the supply chain. As consumers have expressed that they expect ethical choices to be made on their behalf by the retailers and brands they already buy from, as shown in Section 6.7.4 of Chapter 6, ethical attributes should be made readily available to all consumers as clearly as possible, in order for all to participate in the shared accountability of good practice (Zane et al., 2015). Circular economy fashion brands need to communicate a clear, authentic message about their supply chain transparency to ensure trust, participation and loyalty. Examples of clear and effective communication of supply chain transparency are shown in modern fashion brands Everlane and Eileen Fisher, as shown in Table 21 (Eileen Fisher, 2017; www.everlane.com, 2017). Both brands make information about their suppliers and manufacturing available through their online stores with options to click through further links to find out more information about factories, materials and certifications. The information presented represents the sectors of **MATERIALS** and **MANUFACTURE**, communicating directly with the **RETAIL** sector, and in turn with the **USE** phase consumer group. The information is clear and free from confusing terminology, presenting a trustworthy and authentic message from each brands website.

7.2.6 Multichannel

Multichannel messages have the advantage of reaching a wide audience by combining online and offline channels. Regarding information sources on fashion and shopping shown in Section 6.4.5 of Chapter 6, respondents indicated preferences for online channels such as websites and social media, print media such as newspapers and magazines and through social interaction, either online through social networks, or in person such as shopping with friends or talking with friends and family. Regarding information sources for how to deal with unwanted clothes and textiles shown in Section 6.4.5 of Chapter 6, the majority of respondents reported learning what to do from home and family life or from talking with friends and family, as well as from public information flyers received in the post. Younger respondents expressed the strongest preference for receiving information through social interaction, either online or in person, using social media and blogs or talking or shopping with friends and family as shown in Section 6.4.6 of Chapter 6. Having established the importance of these younger consumer groups as fashion opinion leaders it is important to engage with them through the most appropriate channels in order to direct the most effective behaviour changes. Socially engaging communication through social media, online content and shared peer and family experiences would yield the most effective results in promoting responsible consumption and divestment behaviours for circular economy fashion.

For circular economy brands and businesses, increased availability of information online has resulted in individuals being more informed than ever before (Mintel, 2009b; Bly et al., 2015), and it is through these channels of online and social engagement that consumers seem most ready to receive these messages as shown in Section 6.4.5 of Chapter 6. Using social comparison and peer-to-peer dialogue may also provide a platform to engage individuals through more positive messages of social change and clean technologies than in guilt inducing judgements of previous behaviour, as well as offering fresh opportunities for individuals to make the right decisions going forward. Circular economy fashion communication must take advantage of rapidly evolving and socially engaging forms of communication to keep up with consumer information preferences. High street fashion brand H&M, representing the sectors of **DESIGN** and **RETAIL** (H&M, 2017) have successfully launched a multichannel approach to their communications, as shown in the Table 21, utilising a website, social media and a YouTube channel (H&M and YouTube, 2017) to target consumers in the USE phase, while also connecting with supply chain collaborators in the **REUSE** and **RECYCLING** sectors through their Global Change Award and work with Mistra Future Fashion (globalchangeaward.com, 2017; mistrafuturefashion.com, 2017). Through this strategy H&M present a convincing image of a brand working towards incorporating circular economy values into their current business model, and are able to connect with consumers through high profile campaigns such the music video collaboration with musician M.I.A. for World Recycle Week (H&M, 2017).

7.2.7 Coherent values

For companies and brands operating within circular economy fashion, core values must be clearly communicated and followed through across the supply chain. A coherent message about company values was often demonstrated through participating brands' websites and through online articles about the brands by sustainable fashion bloggers. Information on the provenance of materials and production was given, highlighting the ethos behind each brand's activities in creating enduring and sustainable fashion. For a fully functioning circular fashion system to be in place, understanding of the entire lifecycle by all participants is required, including consumers. This can only be achieved through a clear and coherent communication of values; demonstrating the best alternatives and responsible choices to consumers, rather than pointing out what they were currently doing wrong. In Section 5.2.5 of Chapter 5, informants intimated that feelings of guilt would not be helpful in changing consumer attitudes. Converting the way individuals think about consumption is balanced very finely between communicating the right message or inducing guilt, making individuals feel judged for their previous consumption behaviour. Research by Zane et al. (2015) has shown that 'consumers who wilfully ignore ethical product attributes often denigrate other, more ethical consumers

who seek out and use this information in making purchase decisions'; but that 'denigration becomes less strong if the wilfully ignorant consumers have a second opportunity to act ethically after initially ignoring the ethical product information.' As established in Section 6.6.3 of Chapter 6, consumers expect ethical choices to be made on their behalf by the retailers and brands they buy from. These actions and values must always be clearly communicated in circular economy fashion to keep all individuals involved and engaged. An example of a circular economy fashion brand coherently communicating their values in the **MATERIALS** and **MANUFACTURING** sectors is Tom Cridland (www.tomcridland.com, 2017), as shown in Table 22. The brand sells t-shirts, sweatshirts, trousers and jackets guaranteed for 30 years. Online information on the brand website communicates how products are made from high quality materials such as organic cotton, wool and cashmere, and are constructed using techniques to prevent shrinkage, pilling and excessive wear. The brand also offers free repairs and tailoring for the first 30 years of each garments lifetime. The combination of clarity and coherent values, plus guarantee of durability work to effectively communicate a message of authenticity in reducing the level of consumption to consumers in the phases of **USE** and **REPAIR**.

7.2.8 Visually engaging

Circular economy fashion messages should ideally be short, creative and image led with unique text, images and symbols. Representing the sectors of **DESIGN** and **UPCYCLING**, UK sustainable fashion brand Goodone made use of stylish, image led communication through their website and online fashion boutiques and editorial, communicating directly with the sectors of **RETAIL** and consumers in the **USE** phase, as detailed in Table 22. This strategy also incorporated strong visual elements such as a distinctive style, logo and graphic design approach. All brands and designers interviewed created design led, fashion forward garments, modelled in styled images and product shots (www.traidremade.com, 2012; www.goodone.co.uk, 2013; shop.thtc.co.uk, 2015; www.antiformonline.co.uk, 2015; www.fromsomewhere.co.uk, 2015; www.heretoday-heretomorrow.com, 2015; www.thefaraworkshop.org, 2015; www.nosuchthing.clothing, 2016). Each brand also had a distinctive style, logo and graphic design approach. These elements all worked together to create a visually engaging identity, often presented through a strong online presence; however many informants felt that mainstream media coverage was lacking in provision.

Informants were often frustrated that sustainable fashion was often shown as a novelty and not integrated alongside other fashion editorial as detailed in Section 5.2.3 of Chapter 5. Not enough was being done to highlight responsible alternatives to continued fashion consumption or to show sustainable style as being equally desirable as high street fashion. In Section 5.2.3

of Chapter 5, informants were unanimous in their opinion that style and design were the most effective ways to appeal to consumers, who would only regard ethics as a bonus addition. Connecting with consumers through aesthetics is vitally important in order to create a platform on which to engage individuals on the sustainable credentials and human stories regarding garment workers and the fashion industry, however this must be supported by the ability for brands to create well researched and targeted communications.

7.2.9 Compelling products

Circular economy fashion often benefits from a design led approach which creates unique pieces that attract consumers to buy into the slow-fashion movement. In Section 5.2.3 of Chapter 5 informants expressed that establishing attractive designs would enable sales, followed by consumer understanding of the terms, care practices and provenance related to sustainable fashion offerings and that this in turn would add to the confidence of customers in making further purchases. The distinctive style of each brand resulted in design-led fashion pieces and highly compelling products; however the extra work in sourcing materials and smaller production runs ensuring ethical standards often led to higher prices as detailed in Section 5.3.2 of Chapter 5. Successfully communicating the wider global benefits of producing in this way to consumers is key to generating sales of products and services for circular economy brands. The strongest results reported in gaining this level of understanding and acceptance, including sales and repeat custom, was through online interactions and in-store dialogue in dedicated ethical fashion stores, as shown in Section 5.2.3 of Chapter 5. Providing enough information about the ethical product credentials and origin of the source materials needed to be carefully balanced against showing garments for their aesthetic appeal. Circular economy fashion must create compelling products that are able to compete with the style and design, as well the prices of the high street. Ethical fashion brand People Tree (People Tree, 2017) have successfully combined an offering of stylish and wearable clothes, able to compete with current high street fashion in style and price, with sustainability and ethics information representing the sectors of **MATERIALS**, **MANUFACTURING** and **DESIGN**, clearly communicated through their online store to consumers in the **USE** phase, as shown in Table 22. The brand is sold online through its own website and through popular online fashion retailers ASOS.com, and stocked internationally throughout Europe, USA and Japan, demonstrating an effective communication of style and ethics creating a wide appeal.

7.2.10 Feedback loops

Feedback loops would enable communication messages to travel both ways between all stakeholders operating in circular economy fashion system, from brands and companies to individuals and consumers as shown in Figure 59. As shown in Section 5.2.3 of Chapter 5,

social media presented opportunities for feedback from consumers, allowing individuals to express opinions and reactions towards new products, traceability, production information and the message communicated. Feedback loops in the form of in-store or postal take back schemes for unwanted items present an additional way for consumers to participate in good practice, and by offering full circularity to consumers, brands are able to communicate a commitment to diverting waste. Collection services in retail areas offer convenience to younger consumer groups who expressed their preference for frequenting retail locations shown in Section 6.4.2 and Section 6.5.2 of Chapter 6. As consumers are motivated by charitable concerns when donating clothes and textiles (Joung and Park-Poaps, 2013), a charitable association creates additional opportunity for social, economic and environmental benefits, which should also be communicated to consumers. In support of a charitable cause, garment donations would raise funds, divert more items from the waste stream and create more value for collectors through higher quality collections, enabling them to continue to operate the scheme.

As a company representing the **RETAIL** sector, Marks and Spencer have utilised the communication feedback loop of in-store take back of unwanted clothes and textiles to also represent the **REUSE** and **RECYCLING** sectors in their communication to consumers and individuals in the **REUSE**, **RECYCLING** and **USE** phases, as shown in Table 22. As highlighted in Section 2.2.1 of the Literature Review, 'working towards the responsible disposal of clothing, Marks and Spencer partnered with the globally renowned British charity Oxfam. As part of its 'Plan A' social responsibility objectives, the retailer ran a 'Clothes Exchange' scheme in which a £5 money off voucher is exchanged for each bag of returned, unwanted clothing, originally purchased from its stores (Morgan and Birtwistle, 2009; Marks and Spencer, 2011). The scheme not only increased donations of used clothing items, but also sales in stores (Morgan and Birtwistle, 2009). Through regular collections and two 'One Day Wardrobe Clear-Out' events, the scheme collected 1.8 million garments in its first year, and 3 million in its second year, helping to raise £3.3m for Oxfam (Marks and Spencer, 2011).' The scheme was successfully communicated through TV adverts, editorial, online and through in-store information, and continues to run in-stores today.

Feedback can also take the form of product returns, in which the opportunity to identify product failures or asses life-cycle impacts is presented. Retail feedback from wholesale customers is also key to developing and growing circular economy fashion, and integrating collections into a wider variety of outlets. Creating feedback loops, which incorporate suggestions across the supply chain, enables engagement with all stakeholders and individuals. As discussed in Section 6.7.1 of Chapter 6, additional opportunities for two way communication are presented in engagement activities such as clothes swaps and mending groups, in which exchanges of

information, knowledge, clothes and textiles can take place, as recommended by Albinsson and Perera (2012) and McLaren and McLauchlan (2015). Circular economy fashion should make use of each opportunity to offer greater circularity in fashion and textiles, through physical and virtual feedback loops relating to products, information and social interaction in order to stay up to date with and fully understand the needs of all stakeholders. A brand that has successfully made use of these feedback loops and strategies for engagement is Chapter 5 informant Antiform (www.antiformonline.co.uk, 2015). Antiform pioneered fashion and textile material feedback loops through their use of pre-consumer textiles as source materials, and through their engagement events such as clothes swaps and community workshops in Leeds. Now based in Bristol the brand continues to produce using reclaimed textiles and heritage materials and to engage stakeholders throughout the supply chain in feedback loops through social media, research, consultancy and education.

8. Conclusions

The focus of this research was to expose the underlying mechanisms behind current practices in circular economy fashion and textiles systems, in order to understand how these practices could be more widely adopted by the mainstream. The first aim of the research was to analyse the current practices of post-consumer textile collectors. Three post-consumer textile collectors participated in the case study research which addressed this aim. A consumer survey also addressed issues relating to garment divestment in order to collect data relevant to post-consumer textile collection. The four main routes for these companies to collect used textiles were using textile banks, from unsold charity shop stock collections, from door-to-door collections and collections from cash for clothes shops. While textile banks were the most commonly used and preferred method, charity shop collections also provided significant volumes and door-to-door collections provided the best quality items. Collections from cash for clothes shops were variable in quality dependent on source and location; however this method offered additional benefit to the public in terms of immediate resale value for unwanted items. As all four strategies were able to yield good quality and significant volumes of textile, it is clear that their role as part of a circular economy fashion and textiles system is necessary and justified. Additional collection strategies in the form in-store take back schemes for retailers and appointment based door-to-door collections have the potential to collect more volumes of the best quality textiles. A separate provision to collect low grade textiles for recycling purposes has the potential to divert more textiles from the waste stream and provide an additional revenue stream for collectors.

Factors affecting collection volumes and quality are the location and convenience of services. Textiles collected from local authority waste sites were high in volume but of variable quality, suggesting these locations could operate a separate provision to collect low grade textile. Textiles collected directly from homes in door-to-door collections were considered of the best quality. LMB reported that collections from cash for clothes shops were also of the best quality, indicating that collection services located in local retail sites and residential areas would be able to target the best quality items. It was also noted by IGC that an association with a charity positively affected the quality of collections, suggesting that a textile collection on behalf of a charitable organisation would work to both raise funds for a good cause and collect the best quality items as part of a circular economy fashion and textiles system. Collection volumes are also subject to seasonal fluctuations, with greater volumes collected in summer and less in winter, indicating that winter months may be an ideal time of year to trial new collection services such retailer take back schemes or appointment based home collections.

Both export prices, demand and collection volumes for used textiles have fallen since 2013, creating uncertainty and instability in a declining market. Collectors are striving to find value by diversifying their product offerings and searching for new markets. Fashion upcycling presents an opportunity to utilise collected volumes to create products with a high resale value, however barriers to scaling up production have prevented this route becoming more integrated into the mainstream so far. If textile collectors were able to provide clear and consistent sourcing information to the fashion industry this would address issues relating to the consistent sourcing of post-consumer textiles for high volume production. A database of textile supply would enable designers to make decisions based on the availability of source materials. Fibre-to-fibre recycling is also an emerging market for low grade used textiles. Barriers to the wider adoption of this strategy are linked to sourcing pure fibres as the technology cannot currently utilise unknown mixed blends as a feedstock. In order to take advantage of this new market, collectors would need to adopt new practices to accurately sort by fibre type. Newly developing hyperspectral imaging technology may provide a possible solution to fibre sorting issues, however advancements will need to made in creating a cost effective process before collectors can fully take advantage of this route.

The second aim of the research was to analyse current practice in circular economy fashion design and communication strategy. Five sustainable fashion experts and ten brands creating and selling ethical, sustainable or upcycled fashion were interviewed as part of the case study research for this phase of the study. One of the textile collectors also operated an upcycled fashion label and was interviewed as part of the research into in circular economy fashion practice. The design brief was utilised as the starting point to build sustainable design and production strategies into circular economy fashion supply chain, with focus on use phase impacts. A design led approach created desirable products and functioned as part of a distinctive style identity. This visually engaging strategy was an essential component in effectively communicating with consumers for circular economy fashion brands. Materials sourcing also addressed issues of sustainability by utilising post-consumer, post-industrial and pre-consumer textiles. Sourcing for upcycled fashion took place near to the beginning of the design and production process and informed all consecutive stages. Additional time was built into the upcycling and remanufacturing cycle in order to research and locate material supply. A textile collection database would facilitate sustainable sourcing as part of a circular economy fashion system. Limited resources were utilised efficiently with novel pattern cutting techniques and a flexible design formula. A style of panelled ‘patchwork’ pattern cutting allowed for fabric substitutions changeable material supply. A slow fashion approach was often utilised by circular economy designers as an alternative to the faster pace of mainstream production. Small scale production and local sourcing were key elements of this strategy.

Modular manufacturing techniques were also utilised to produce upcycled designs as the flexibility in this system allows for the high degree of changes which can occur due to inconsistencies in material supply. Cutting from post-consumer garments, production leftovers and irregularly shaped fabrics, and using modular production techniques creates a highly labour intensive process. While this can drive up prices it also offers the scope for creating increased employment and training guided by ethical and sustainable principles in the declining sector of apparel manufacture.

Barriers to the wider integration of circular economy fashion strategies into mainstream fashion retail were identified by interview informants. Designers in mainstream fashion enterprises are rarely given the freedom to make decisions relating to sustainable supply chain processes. For those working within sustainable fashion, difficulties identifying the most appropriate retail strategy has proved to be barrier to reaching a wider audience. Charity retail locations have proved to be an unsuccessful sales strategy for higher priced upcycled fashion and several dedicated ethical fashion boutiques ceased trading during the time of this research due to high overhead costs. Effective communication has also proved to be problematic for circular economy fashion. A lack of resources to dedicate to promotion and a lack of market knowledge have resulted in brands being unable to identify, understand and effectively communicate with their target market. Further barriers are presented by the lack of appropriate coverage in mainstream fashion media, and consumer confusion over the sustainable fashion message. In order to create effective communication in circular economy fashion it will be necessary for brands to access market intelligence regarding their target market, information preferences and behaviour motivations. Opportunities to optimise the circular economy fashion system are presented in creating a synchronised online retail and promotion strategy which takes advantage of lower overhead costs and social media audiences to create highly engaging customer relationships. An essential component of this strategy will be to utilise an effective communication strategy with a clear target audience in mind.

The third aim of this research was to evaluate how consumer attitudes and behaviours impact on a sustainable fashion system. 353 completed questionnaires were analysed to investigate consumer perspectives necessary to create effective circular economy fashion communication and business strategies. Areas of inquiry covered garment use and divestment, fashion influences and sources of information, fashion shopping behaviour and outlook on fashion consumption and ethics. Study findings indicated that significant proportions of worn out clothing, socks and underwear were ending up in the municipal waste stream after being directly binned or first made into cleaning rags which would eventually end up in the bin. Consumers were unaware of how these items could be collected and valued as part of a circular economy system, indicating that a greater provision of information and services to

collect these low grade items could divert more from the waste stream. Textile banks and charity shop donation were the main routes for clothes and textiles which consumers believe to still be of value to others, and convenience was shown to be the major factor affecting garment divestment. Offering greater convenience in collection services would also work to increase yields and divert more from the waste stream. Consumers responded positively to the idea of clothes swaps, which could serve as a complimentary strategy in optimising textile collection and engaging consumers with sustainable behaviour. Providing informal repair workshops to enable consumers to mend their own garments would also divert items from the waste stream and engage consumers with sustainability.

Findings indicated that the two youngest age groups of 18 to 24 and 25 to 34 exhibited characteristics of fashion leaders and fashion followers, such as emotional satisfaction from shopping and browsing, and high concern for trends and newness. Although these two expressed the least concern for sustainable fashion, they are important as fashion opinion leaders and majority consumers. Both groups were driven by style and price and indicated that these would be the deciding purchase factors for sustainable fashion. The 18 to 24 age group also favoured high street shopping and retailers such as H&M and Primark. Locating used textile collection services in the retail locations frequented by these groups would work to increase yields for collectors as high street shopping was still popular with all age groups and over half of respondents shopped more frequently than once a month. Circular economy fashion will have to find a way to compete with retailers leading with low prices and high volumes. To engage young consumers with sustainable garment behaviours it may be necessary to combine sustainability with high turnover fashion in more cyclical methods of production, consumption and divestment. Were sustainable practices to be adopted as standard by mainstream production, consumers would then be presented with implicit circularity without having to make an extra effort to opt for this choice.

Respondents indicated a strong preference for online shopping and online sources of information such as brand and fashion websites, social media and blogs, confirming that a strategy for online retail and promotion would be the most successful for circular economy fashion. Exchanging information with friends and family, while talking, shopping or from home life was also a preferred source of knowledge. Communicating through online channels and creating shared participatory experiences would work to effectively promote circular economy fashion behaviour and providing alternative fashion engagement strategies to replace the shopping experience could work to change high consumption behaviour in favour of more conscientious routes. Findings indicated that consumers over 35 years of age were the most closely aligned with circular economy fashion principles and engaging these groups with sustainable fashion through personal style and well-being may be the most successful

strategy. A high percentage of respondents indicated that ethical and environmental issues were important to them, however similar numbers did not correspond to having made a clothing purchase because of the ethics of the brand, confirming the 'values-action gap' between expressed attitudes and actual behaviour. Respondents also ranked themselves as consumers as having the least responsibility for making ethical and environmental fashion choices, and retailers and brands as having the most responsibility. This indicates that ethical and sustainability issues should be integrated into mainstream fashion as standard practice, offering consumers the implicit sustainability which they already expect should be present and enabling them to incorporate responsible choices into their regular behaviour with the most convenience. This should be accompanied by clear communication of how good practice enables all stakeholders to be equally responsible for ethical choices for an effective consumer understanding of shared accountability.

The fourth research aim was to develop an effective fashion communication strategy for a circular economy. Insights from the textile collection case studies, circular economy fashion interviews and the consumer survey were synthesised with regard to relevant literature to create a communication strategy for circular economy fashion. In order to create this strategy, it was first necessary to develop the conceptual framework for circular economy fashion for the fifth aim of the research. Creating the framework enabled communication to be visualised as essential flows of information between all stakeholders and each stage of the circular economy. Results and analysis established communication as an essential moderator regarding sustainable behaviours and practice. Therefore an effective communication strategy for circular economy fashion and textiles was developed to detail the essential elements for engaging stakeholders in collaborative best practice. To facilitate positive decision making the strategy for communication requires relevant market research to identify the target audience. A clear, multi-channel message should be communicated to the identified audience, with visual appeal and a compelling value proposition backed up by coherent values. Feedback loops for two way dialogue between each part of the circular fashion and textiles system are necessary to facilitate clarity, understanding and engagement between stakeholders.

The fifth aim of this study was to propose a conceptual framework for transitioning towards a circular economy fashion system. The framework links pre-consumer processing stages of raw materials, material production and sourcing, design, redesign and upcycling, manufacture and remanufacture and retail with the post-consumer stages of use, collection, reuse and repair and recycling which link back to material processing stages through both material and communication flows. Understanding how these flows of materials and information affect circular economy fashion systems works to keep existing materials in productive use for longer and create feedback loops for behaviour change for maximum lifecycle savings. Significant

carbon, water and waste savings can be made when used textiles function as secondary raw materials, for recycling into new products. Used textiles collected from post-consumer and pre-consumer sources can be used for chemical and mechanical textile recycling. For these purposes, the ability to accurately identify the fibre composition of feedstock materials would expedite the uptake of circular economy textile practices, creating both environmental and financial rewards. Sustainable design principles are also key to implementing a circular economy fashion strategy, not just in creating desirable products, but in determining a significant proportion of a product's environmental impacts. Communication flows between design and production professionals and downstream supply chain stakeholders enable more informed decisions to be made collaboratively for shared accountability. Continued transparent communication of these material inputs and production practices through to retail, use, reuse and repair enables consumers to remain engaged in shared good practice. End-of-life strategies such as collection and recycling enable material flows to cycle back to production and use phases, facilitating circularity and limiting new material inputs.

8.1 Recommendations

The research revealed recommendations for implementing circular economy strategies for collectors and retailers, in order to more fully engage consumers in sustainable behaviour.

- Increase the provision of existing textile collection services and trial new systems such as low grade textile collection and appointment based collections.
- Create targeted online communications for increased participation in textile collection activities
- Locate collection services for maximum convenience to donators in retail and residential locations
- Create charity associations for textile collection services to raise funds and improve quality
- Engage individuals through participatory social activities such as clothes swaps, fashion shows and repair workshops to optimise the clothing use phase and compliment collection services
- Create short cycles of 100% recyclable closed-loop production, consumption and return for fast fashion consumers

- Utilise online retail and promotion strategies to integrate circular economy fashion into the mainstream
- Communicate clearly on sustainable practices to keep all stakeholders involved
- Collaborate with mainstream retail and academic institutions to integrate sustainability and access the relevant research

Further research

Further investigation into strategies to optimise textile flows and prevent waste is recommended based on the findings of the research.

- Collection trials:
    - Low grade textile waste collection
    - Appointment based door-to-door collection
    - Comparison of retail and residential collection bank volumes
    - Comparison of collection volumes for charity and commercial services
- Investigate emerging end markets for pure fibres
- Test the communication strategy through participatory action research with circular economy fashion brands
- Test the conceptual framework through participatory action research and test trading

9. References

Al-Debei, M. M. and Avison, D. (2010) 'Developing a unified framework of the business model concept.' *European Journal of Information Systems*. Nature Publishing Group, 19(3) pp. 359–376.

Albinsson, P. A. and Perera, B. Y. (2009) 'From trash to treasure and beyond: the meaning of voluntary disposition.' *Journal of Consumer Behaviour*, 8 pp. 340–353.

Albinsson, P. A. and Perera, B. Y. (2012) 'Alternative marketplaces in the 21st century: Building community through sharing events.' *Journal of Consumer Behaviour*, 11 pp. 303–315.

Alliance for Artisan Enterprise (2015) *The Global Artisan Sector*. Alliance for Artisan Enterprise. [Online] [Accessed on 29th January 2016] http://www.allianceforartisanenterprise.org/artisan-sector/.

Allwood, J. M., Laursen, S. E., Malvido de Rodriguez, C. and Bocken, N. M. P. (2006) *Well dressed? The present and future sustainability of clothing and textiles in the United Kingdom*. Cambridge: University of Cambridge-Institute for Manufacturing.

Andrews, D. (2015) 'The circular economy, design thinking and education for sustainability.' *Local Economy*.

Armstrong, C. M. and LeHew, M. L. A. (2011) 'Sustainable Apparel Product Development: In Search of a New Dominant Social Paradigm for the Field Using Sustainable Approaches.' *Fashion Practice The Journal of Design, Creative Process & the Fashion Industry*, 3(1) pp. 29–62.

Aus, R. (2011) *Trash to Trend - Using Upcycling in Fashion Design*. Estonian Academy of Arts.

Axinn, W. G. and Pearce, L. (2006) *Mixed Method Data Collection Strategies*. Cambridge: Cambridge University Press.

Bag 2 School (2017) *Bag 2 School*. uk.bag2school.com. [Online] [Accessed on 25th January 2017] http://uk.bag2school.com/.

Bank of England (2014) *Bank of England | Inflation Calculator*. [Online] [Accessed on 11th August 2014] http://www.bankofengland.co.uk/education/Pages/resources/inflationtools/calculator/flash/default.aspx.

Bartlett, C., McGill, I. and Willis, P. (2013) *Textiles flow and market development opportunities in the UK*.

Baumann-Pauly, D., Wickert, C., Spence, L. J. and Scherer, A. G. (2013) 'Organizing Corporate Social Responsibility in Small and Large Firms: Size Matters.' *Journal of Business Ethics* pp. 1–13.

Beard, N. D. (2008) 'The Branding of Ethical Fashion and the Consumer: A Luxury Niche or Mass-market Reality?' *Fashion Theory: The Journal of Dress, Body & Culture*. Berg Publishers, 12(4) pp. 447–468.

Benjamin, H. (2010) *An investigation of consumer motivations towards buying fashion online*.

Berry, H. and McEachern, M. (2006) 'Informing Ethical Consumers.' *In* Harrison, R., Newholm, T., and Shaw, D. (eds) *The Ethical Consumer*. London: Sage.

Bhaskar, R. (1978) *A Realist Theory of Science*. Hassocks: Harvester Press.

Bianchi, C. and Birtwistle, G. (2012) 'Consumer clothing disposal behaviour: a comparative study.' *International Journal of Consumer Studies*, 36(3) pp. 335–341.

Birtwistle, G. and Moore, C. M. (2007) 'Fashion clothing – where does it all end up?' *International Journal of Retail & Distribution Management*, 35(3) pp. 210–216.

Black, S. (2011) *Eco-chic: The Fashion Paradox*. London: Black Dog Publishing.

Black, S. and Anderson, S. (2010) 'Making Sustainability Fashionable: Profile of the Danish Fashion Company Noir.' *Fashion Practice The Journal of Design, Creative Process & the Fashion Industry*, 2(1) pp. 121–128.

Blanco-Velo, J., Lea-Greenwood, G., Power, J. and Tyler, D. (2010) 'Ethical, eco, organic, green… what does it all mean?' *In The European Institute of Retailing and Services Studies Conference 2010*, pp. 1–16.

Blizzard, J. L. and Klotz, L. E. (2012) 'A framework for sustainable whole systems design.' *Design Studies*. Elsevier Ltd, 33(5) pp. 456–479.

Bly, S., Gwozdz, W. and Reisch, L. A. (2015) 'Exit from the high street: an exploratory study of sustainable fashion consumption pioneers.' *International Journal of Consumer Studies*, 39 pp. 125–135.

Bonciu, F. (2014) 'The European Economy : From a Linear to a Circular Economy.' *Romanian Journal of European Affairesf European Affairs*, 14(4) pp. 78–91.

Botticello, J. (2012) 'Between Classification, Objectification, and Perception: Processing Secondhand Clothing for Recycling and Reuse.' *Textile: The Journal of Cloth and Culture*, 10(2) pp. 164–183.

Bowe, H. (2011) *Mainstream press: Who features ethical fashion?* ethicalfashionforum.com. [Online] [Accessed on 30th October 2017] http://source.ethicalfashionforum.com/article/mainstream-press-who-features-ethical-fashion.

Bray, J. P. (2008) 'Consumer Behaviour Theory: Approaches and Models' pp. 1–33.

Brickman Bhutta, C. (2012) 'Not by the Book: Facebook as a Sampling Frame.' *Sociological Methods & Research*, 41(1) pp. 57–88.

British Fashion Council (2010) *The Value of the UK Fashion Industry*. London.

Brooks, A. (2012) 'Stretching global production networks: The international second-hand clothing trade.' *Geoforum*. Elsevier Ltd, 44, January, pp. 10–22.

Brooks, A. (2015) *The hidden trade in our second-hand clothes given to charity*. www.theguardian.com. [Online] [Accessed on 20th February 2015] http://www.theguardian.com/sustainable-business/sustainable-fashion-blog/2015/feb/13/second-hand-clothes-charity-donations-africa.

Bryman, A. (2012) *Social Research Methods*. 4th ed., Oxford: Oxford University Press.

Bryman, A. and Cramer, D. (2011) *Quantitative Data Analysis with IBM SPSS 17, 18 & 19: A Guide for Social Scientists*. Hove: Routledge.

Bureau of International Recycling (2013) *Pressure mounts as prices of originals reach 'a zenith.'* www.bir.org. [Online] [Accessed on 15th July 2013] http://www.bir.org/news-press/latest-news/bir-shanghai-textiles-pressure-mounts-as-prices-of-originals-reach-a-zenith/.

Burke, H., Claes, M., Gardner, J., Morrish, L. and Ripper, B. (2012) *The Impact of Textile*

Feedstock Source on Value (Charity Shop Collections).

Burke, S. (2008) *Fashion Entrepreneur: Starting Your Own Fashion Business*. Dorset: Ringwood.

Busch, O. von (2008) *FASHION-able: Hacktivism and Engaged Fashion Design*. University of Gothenburg.

Buttle, M., Vyas, D. and Christopher, S. (2013) *Evaluating the financial viability and resource implications for new business models in the clothing sector*.

Caldwell, C. (2012) *Beyond Corporate Responsibility: The New Organizational Consciousness*. Toronto: Tivero Communications Ltd.

Caniato, F., Caridi, M., Crippa, L. and Moretto, A. (2012) 'Environmental sustainability in fashion supply chains: An exploratory case based research.' *International Journal of Production Economics*. Elsevier, 135(2) pp. 659–670.

Carbon Trust (2011) *International Carbon Flows: Clothing*.

Carr, H. and Latham, B. (1994) *Carr and Latham's Technology of Clothing Manufacture*. Tyler, D. J. (ed.). Oxford: Blackwell.

Cassidy, T. D. and Han, S. L.-C. (2013) 'Upcycling Fashion for Mass Production.' *In* Torres, A. L. and Gardetti, M. A. (eds) *Sustainable Fashion & Textiles*. Sheffield: Greenleaf Publishing, pp. 148–163.

Cervellon, M.-C. (2012) 'Something old, something used: Determinants of women's purchase of vintage fashion vs second-hand fashion.' *International Journal of Retail & Distribution Management*, 40(12) pp. 956–974.

Cervellon, M.-C. and Wernerfelt, A.-S. (2012) 'Knowledge sharing among green fashion communities online: Lessons for the sustainable supply chain.' *Journal of Fashion Marketing & Management*, 16(2) pp. 176–192.

Chan, T. and Wong, C. W. Y. (2012) 'The consumption side of sustainable fashion supply chain: Understanding fashion consumer eco-fashion consumption decision.' *Journal of Fashion Marketing and Management*, 16(2) pp. 193–215.

Chapagain, A. K., Hoekstra, A. Y., Savenije, H. H. G. and Gautam, R. (2006) 'The water footprint of cotton consumption: An assessment of the impact of worldwide consumption of cotton products on the water resources in the cotton producing countries.' *Ecological Economics* pp. 186–203.

Chen, H.-L. and Burns, L. D. (2006) 'Environmental Analysis of Textile Products.' *Clothing and Textiles Research Journal*, 24(3) pp. 248–261.

Claes, M., Clissold, D., Gardner, J., Morrish, L. and Ripper, B. (2012) *The Impact of Textile Feedstock Source on Value (Textile Banks)*.

Claes, M., Gardner, J., Morrish, L. and Ripper, B. (2012a) *Impact of Textile Feedstock Source on Value (Charity Door to Door Collections)*.

Claes, M., Gardner, J., Morrish, L. and Ripper, B. (2012b) *The Impact of Textile Feedstock Source on Value (Branded Workwear)*.

Claes, M., Gardner, J., Morrish, L. and Ripper, B. (2012c) *The Impact of Textile Feedstock Source on Value (Cash 4 Clothes Scheme)*.

Claes, M., Gardner, J., Morrish, L. and Ripper, B. (2012d) *The Impact of Textile Feedstock Source on Value (Comingled Kerbside Collections)*.

Clark, H. (2008) ‘Slow + Fashion - an oxymoron - or a promise for the future ...?’ *Fashion Theory - Journal of Dress Body and Culture*, 12(4) pp. 427–446.

Clean Clothes Campaign (2013) ‘Living Wage versus Minimum Wage.’

Collins, R. C. (2013) *Excessive ... But not wasteful? Exploring young people’s material consumption through the lens of divestment*. University College London.

Confino, J. (2015) *Future of Europe’s circular economy mired in controversy*. The Guardian. [Online] [Accessed on 2nd June 2015] http://www.theguardian.com/sustainable-business/2015/feb/03/architect-europe-circular-economy-strategy-lambasts-successors#comments.

Cooper, T., Hill, H., Kininmonth, J., Townsend, K., Hughes, M., Knox, A. and Fisher, T. (2013) *Design for Longevity: Guidance on increasing the active life of clothing*.

Cox, V., Boulos, S., Fitzgerald, J., Vinogradova, M., Buckland, T. and Thoung, C. (2013) *Economic Impacts of Resource Efficient Business Models*.

Crang, M., Hughes, A., Gregson, N., Norris, L. and Ahamed, F. (2013) ‘Rethinking governance and value in commodity chains through global recycling networks.’ *Transactions of the Institute of British Geographers*, 38(1) pp. 12–24.

Creswell, J. W. (2014) *Research design: qualitative, quantitative, and mixed methods approaches*. 4th ed., California: SAGE.

Creswell, J. W. and Miller, D. L. (2000) ‘Determining Validity in Qualitative Inquiry.’ *Theory Into Practice*, 39(3 Getting Good Qualitative Data to Improve Educational Practice) pp. 124–130.

Dadigamuwage, G. K. D. (2012) *Sustainable and Remanufactured Fashion*. The University of Manchester.

Dawson, T. (2012) ‘Progress towards a greener textile industry.’ *Coloration Technology*, 128(4) pp. 261–269.

DEFRA (2007a) *Sustainable Clothing Road Map Briefing Note - Sustainability Impacts of Clothing and Current Interventions*.

DEFRA (2007b) *Waste Strategy for England 2007*.

DEFRA (2009) *Maximising Reuse and Recycling of UK Clothing and Textiles - Project Summary, Key Findings, Researchers ’ Recommendations, Methodology & Scope*.

DEFRA (2010) *Sustainable Clothing Action Plan*.

DEFRA (2011) *Guidance on applying the Waste Hierarchy*.

DEFRA (2013) *Sustainable Development Indicators*.

DEFRA (2015a) *About - Department for Environment, Food & Rural Affairs - GOV*. www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about#who-we-are.

DEFRA (2015b) *UK Statistics on Waste – 2010 to 2012*.

Denscombe, M. (2010a) *Good Research Guide : For small-scale social research projects*. 2nd ed., Maidenhead: Open University Press.

Denscombe, M. (2010b) *The Good Research Guide*. 4th Editio, Maidenhead: Open University Press.

Denzin, N. K. and Lincoln, Y. S. (2013) *Collecting and interpreting qualitative materials by*. 4th ed., London: SAGE.

derby.ac.uk (2016) *The Research Onion*. onion.derby.ac.uk/onion.pdf.

Dissanayake, G. and Sinha, P. (2015) 'An examination of the product development process for fashion remanufacturing.' *Resources, Conservation and Recycling*. Elsevier B.V., 104 pp. 94–102.

Ditty, S. (2015) *It's time for a fashion revolution*. *Dec 2015*.

Domina, T. and Koch, K. (1999) 'Consumer reuse and recycling of post-consumer textile waste.' *Journal of Fashion Marketing and Management: An International Journal*, 3(4) pp. 346–359.

Draper, S., Murray, V. and Weissbrod, I. (2007) 'Fashioning Sustainability: A review of the sustainability impacts of the clothing industry.' *In Forum for the Future*.

Drexhage, J. and Murphy, D. (2010) *Sustainable Development: From Brundtland to Rio 2012*. *New York*.

Dufresne, T. and Martin, J. (2003) 'Process Modeling for E-business.' George Mason University pp. 1–28.

Dunn, J. (2008) *ReFashion ReDunn*. Massey University, Wellington, New Zealand.

Easton, G. (2010) 'Critical realism in case study research.' *Industrial Marketing Management*. Elsevier Inc., 39(1) pp. 118–128.

Eder-Hansen, J., Kryger, J., Morris, J., Sisco, C., Bang Larsen, K., Watson, D., Kiørboe, N., Dahlgren Petersen, S. and Burchardi, I. (2012) *The NICE consumer research summary and discussion paper*.

Edwards, P. K., O'Mahoney, J. and Vincent, S. (2014) *Studying Organizations Using Critical Realism: A Practical Guide*. Oxford: Oxford University Press.

Eifler, C. and Diekamp, K. (2013) 'Consumer Acceptance of Sustainable Fashion in Germany.' *Research Journal of Textile and Apparel*, 17(1).

Eileen Fisher (2017) *Eileen Fisher*. www.eileenfisher.com. [Online] [Accessed on 17th January 2017] http://www.eileenfisher.com/?___store=en&___from_store=default.

Eisenhardt, K. M. (2010) 'The Qualitative Researcher's Companion Building Theories From Case Study Research.' *In The Qualitative Researchers Companion*, pp. 1–16.

Elkington, J. (2004) 'Enter the Triple Bottom Line.' *In* Henriques, A., & Richardson, J. (ed.) *The Triple Bottom Line: Does it all Add Up?* London: Earthscan.

Ellen MacArthur Foundation (2010) *Towards the Circular Economy - Economic and business rationale for an accelerated transition - Executive Summary*. *The Ellen MacArthur Foundation*.

Ellen MacArthur Foundation (2013a) *Towards the Circular Economy 1: Economic and business rationale for an accelerated transition*. *The Ellen MacArthur Foundation*.

Ellen MacArthur Foundation (2013b) *Towards the Circular Economy 2: Opportunities for the consumer goods sector*.

Ellen MacArthur Foundation (2014) *Towards the Circular Economy 3: Accelerating the scale-up across global supply chains*.

Ellen MacArthur Foundation (2016) 'The New Plastics Economy: Rethinking the future of

plastics' p. 120.

Ethical Fashion Forum (2011) *The Market for Ethical and Sustaiable Brands*.

Euratex (2014) *Annual Report 2014*.

European Commission (2003) *Economic and Competitiveness Analysis of the European Textile and Clothing Sector in Support of the Communication 'The future of the textiles and clothing sector in the enlarged Europe.'*

European Commission (2011a) *Analysis associated with the Roadmap to a Resource Efficient Europe*.

European Commission (2011b) *Roadmap to a Resource Efficient Europe*.

European Commission (2012) *MANIFESTO FOR A RESOURCE-EFFICIENT EUROPE*.

European Commission (2013) *Trade Issues (Textiles and Clothing)*. http://ec.europa.eu/enterprise/sectors/textiles/external-dimension/trade-issues/index_en.htm. [Online] [Accessed on 22nd July 2015] http://ec.europa.eu/enterprise/sectors/textiles/external-dimension/trade-issues/index_en.htm.

European Commission (2014a) 'Questions and answers on the Commission Communication "Towards a Circular Economy" and the Waste Targets Review.'

European Commission (2014b) *Towards a circular economy: A zero waste programme for Europe*. *COM(2014) 398*. European Commission.

European Commission (2015a) *Fashion and high-end industries in the EU*. Fashion and high-end industries in the EU. [Online] [Accessed on 22nd July 2015] Fashion and high-end industries in the EU.

European Commission (2015b) *ROADMAP: Circular Economy Strategy*.

European Commission (2015c) *Textiles and clothing in the EU*. http://ec.europa.eu/growth/sectors/fashion/textiles-clothing/eu/index_en.htm. [Online] [Accessed on 22nd July 2015] http://ec.europa.eu/growth/sectors/fashion/textiles-clothing/eu/index_en.htm.

European Trade Union Confederation (2012) *Textiles*.

Farrant, L., Olsen, S. I. and Wangel, A. (2010) 'Environmental benefits from reusing clothes.' *The International Journal of Life Cycle Assessment*, 15(7) pp. 726–736.

Farrer, J. (2011) 'Remediation: Discussing Fashion Textiles Sustainability.' *In Shaping Sustainable Fashion*. London: Earthscan, p. 192.

Fashion Revolution (2017) '# H A U LT E R N AT I V E.'

fashionrevolution.org (2015) *Fashion Revolution*. fashionrevolution.org. [Online] [Accessed on 4th May 2015] http://fashionrevolution.org/.

Ferri, F., D'Andrea, A. and Grifoni, P. (2012) 'IBF: An Integrated Business Framework for Virtual Communities.' *Journal of Electronic Commerce in Organizations*, 10(1) pp. 1–13.

Field, A. (2013) *Discovering Statistics using IBM SPSS Statistics*. 4th ed., London: Sage Publications Ltd.

Fletcher, K. (2008) *Sustainable Fashion and Textiles: Design Journeys*. London: Earthscan.

Fletcher, K. (2013) 'Sustainable Fashion.' *In* Giard, J. and Walker, S. (eds) *The handbook of design for sustainability*. London; New York: Bloomsbury.

Food and Agriculture Organization of the United Nations and International Cotton Advisory Committee (2013) *World Apparel Fiber Consumption Survey 2013*.

Gam, H. J. and Banning, J. (2011) 'Addressing Sustainable Apparel Design Challenges With Problem-Based Learning.' *Clothing and Textiles Research Journal*, 29(3) pp. 202–215.

Gam, H. J., Cao, H., Farr, C. and Kang, M. (2010) 'Quest for the eco-apparel market: a study of mothers' willingness to purchase organic cotton clothing for their children.' *International Journal of Consumer Studies*, 34(6) pp. 648–656.

Gardner, J., Morrish, L., Claes, M. and Ripper, B. (2012) *The Impact of Textile Feedstock Source on Value (Kerbside Collections)*.

Gereffi, G. and Frederick, S. (2010) 'The global apparel value chain, trade and the crisis: challenges and opportunities for developing countries.' *World Bank Policy Research Working Paper*, (April) pp. 1–41.

Giaglis, G. M. (2001) 'A taxonomy of business process modeling and information systems modeling techniques.' *Journal of Flexible Manufacturing Systems*, 13(2) pp. 209–228.

Global Footprint Network (2014) *Living Planet Report 2014*.

Global Slavery Index (2014) *The Global Slavery Index 2014*.

globalchangeaward.com (2017) *Global Change Award*. globalchangeaward.com. [Online] [Accessed on 20th January 2017] https://globalchangeaward.com/.

Golafshani, N. (2003) 'Understanding Reliability and Validity in Qualitative Research.' *The Qualitative Report*, 8(4) pp. 597–607.

Goworek, H., Fisher, T., Cooper, T., Woodward, S. and Hiller, A. (2012) 'The sustainable clothing market: an evaluation of potential strategies for UK retailers.' *International Journal of Retail & Distribution Management*, 40(12) pp. 935–955.

Graafland, J. and Mazereeuw-Van der Duijn Schouten, C. (2012) 'Motives for Corporate Social Responsibility.' *De Economist*, 160(4) pp. 377–396.

Gracey, F. and Moon, D. (2012) *Valuing Our Clothes : the evidence base*.

Guiot, D. and Roux, D. (2010) 'A Second-hand Shoppers' Motivation Scale: Antecedents, Consequences, and Implications for Retailers.' *Journal of Retailing*, 86(4) pp. 355–371.

Gunder, M. (2006) 'Sustainability: Planning's Saving Grace or Road to Perdition?' *Journal of Planning Education and Research*, 26 pp. 208–221.

Gwilt, A. (2011) 'Producing Sustainable Fashion: the points for positive intervention by the fashion designer.' *In Shaping Sustainable Fashion*, pp. 59–74.

Gwilt, A. (2013) 'Valuing the Role of the Wearer in the Creation of Sustainable Fashion.' *Research Journal of Textile and Apparel*, 17(1).

Gwilt, A. and Rissanen, T. (2011) *Shaping Sustainable Fashion*. London: Earthscan.

H&M (2017) *H&M*. www.hm.com. [Online] [Accessed on 17th January 2017] http://www.hm.com/entrance.ahtml?orguri=%2F.

H&M and YouTube (2017) *H&M's YouTube Page*. www.youtube.com/hm. [Online] [Accessed on 17th January 2017] https://www.youtube.com/user/hennesandmauritz.

Ha-Brookshire, J. and Norum, P. (2011) 'Cotton and sustainability.' *International Journal of Sustainability in Higher Education*, 12(4) pp. 369–380.

Hammer, N., Plugor, R., Nolan, P. and Clark, I. (2015) *New Industry on a Skewed Playing Field : Supply Chain Relations and Working Conditions in UK Garment Manufacturing Focus Area - Leicester and the East Midlands*.

Hammond, M. and Wellington, J. (2012) *Research Methods: The Key Concepts*. London; New York: Routledge.

Han, S. L.-C. (2012) *Fashion Upcycling in the UK Women's Wear Industry (Unpublished Masters Dissertation)*. Manchester Metropolitan University.

Han, S. L.-C., Chan, P. Y. L., Venkatraman, P., Tyler, D. J., Apeagyei, P. R. and Cassidy, T. (2016) *Standard vs . Upcycled Fashion Design and Production*. *Fashion Practice*.

hansard.parliament.uk (2011) *Clothing Industry: Ethical and Sustainable Fashion [Baroness Young of Hornsey]*. Hansard Online. [Online] [Accessed on 30th October 2017] https://hansard.parliament.uk/Lords/2011-03-03/debates/11030374000178/ClothingIndustryEthicalAndSustainableFashion.

Hansen, K. T. (2004) 'Helping or hindering? Controversies around the international second-hand clothing trade.' *Anthropology Today*. Wiley Online Library, 20(4) pp. 3–9.

Harris, J. M. (2003) *Sustainability and sustainable development*. International Society for Ecological Economics. [Online] [Accessed on 15th July 2013] http://isecoeco.org/pdf/susdev.pdf.

Heale, R. and Twycross, A. (2015) 'Validity and reliability in quantitative studies.' *Evidence-Based Nursing*, 18(3) pp. 66–67.

Henninger, C. E. (2015) 'Traceability the New Eco-Label in the Slow-Fashion Industry?—Consumer Perceptions and Micro-Organisations Responses.' *Sustainability*, 7(5) pp. 6011–6032.

Hines, P. and Rich, N. (1997) 'The seven value stream mapping tools.' *International Journal of Operations & Production Management*, 17(1) pp. 46–64.

Hines, T. (2005) 'Supply Chain Strategies in the UK Fashion Industry — The Rhetoric of Partnership and Realities of Power.' *International Entrepreneurship And Management Journal* pp. 519–537.

HM Government (2016) *The National Living Wage*. www.livingwage.gov.uk.

Holm, L. S. (2013) 'Innovative Fashion Concepts and the Communication of Sustainability.' *In* Niinimäki, K. (ed.) *Sustainable Fashion: new approaches*. Helsinki: Aalto University, pp. 146–159.

Honest by (2017) *Honest by*. www.honestby.com. [Online] [Accessed on 17th January 2017] http://www.honestby.com/.

Humpston, G., Willis, P., Tyler, D. and Han, S. L.-C. (2014) *Technologies for sorting end of life textiles*.

Hussey, C., Sinha, P. and Kelday, F. (2009) 'Responsible design: Re-using/Recycling of Clothing.' *In 8th European Academy of Design*.

Ijomah, W. L., McMahon, C. A., Hammond, G. P. and Newman, S. T. (2007) 'Development of design for remanufacturing guidelines to support sustainable manufacturing.' *Robotics and Computer-Integrated Manufacturing*, 23(6) pp. 712–719.

Jacka, J. M. and Keller, P. J. (2009) *Business process mapping: improving customer satisfaction*. 2nd ed.

Jankowicz, A. D. (1995) *Business Research Projects*. London: International Thomson Business Press.

Jankowicz, A. D. (2000) *Business research projects*. 3rd ed., London: Thomson Learning 2000.

Jeffrey, M. and Evans, N. (2011) *Costing for the Fashion Industry*. Oxford: Berg Publishers.

Jenkyn Jones, S. (2005) *Fashion Design*. Second Edi, London: Laurence King.

Joergens, C. (2006) 'Ethical fashion: myth or future trend?' *Journal of Fashion Marketing and Management*, 10(3) pp. 360–371.

Johnson, R. B., Onwuegbuzie, A. J. and Turner, L. A. (2007) 'Toward a Definition of Mixed Methods Research.' *Journal of Mixed Methods Research*, 1(2) pp. 112–133.

Jones, C. (2014) *Trading Approaches to Nurturing Sustainable consumption in Fashion and Energy retail (TRANSFER)*.

Joung, H.-M. and Park-Poaps, H. (2013) 'Factors motivating and influencing clothing disposal behaviours.' *International Journal of Consumer Studies*, 37(1) pp. 105–111.

Kang, J. and Park-Poaps, H. (2011) 'Motivational Antecedents of Social Shopping for Fashion and its Contribution to Shopping Satisfaction.' *Clothing and Textiles Research Journal*, 29(4) pp. 331–347.

Kant Hvass, K. (2016) *Weaving a path from waste to value: Exploring fashion industry business models and the circular economy*. Copenhagen Business School.

Keller, C., Magnus, K.-H., Hedrich, S., Nava, P. and Tochtermann, T. (2014) *Succeeding in tomorrow's global fashion market*.

Kibbe, R. (2013) *Why sustainable fashion needs better aesthetics*. www.theguardian.com. [Online] [Accessed on 30th October 2017] https://www.theguardian.com/sustainable-business/sustainable-fashion-blog/sustainable-fashion-better-aesthetics.

Kim, H.-S. and Hong, H. (2011) 'Fashion Leadership and Hedonic Shopping Motivations of Female Consumers.' *Clothing and Textiles Research Journal*, 29(4) pp. 314–330.

Kinder, L. E. (2014) 'Fair Trade Apparel: Purchase Intent among Young Female Adults.' *In Hutton Honors College Indiana University-Bloomington 2014 Undergraduate Research Symposium & Fair*.

Kirchain, R. and Olivetti, E. (2013) 'Material Patterns: Considering the Economic, Environmental, and Social Impacts of the Global Textiles Industry' pp. 1–3.

Kirk, J. and Miller, M. L. (2011) 'Reliability and Validity.' *In Reliability and Validity in Qualitative Research*. Newbury Park: SAGE Publications, Inc, pp. 14–21.

Kozlowski, A., Bardecki, M. and Searcy, C. (2012) 'Environmental Impacts in the Fashion Industry.' *The Journal of Corporate Citizenship*, 45(Spring).

Laitala, K. and Klepp, I. G. (2013) 'Environmental and Ethical Perceptions Related to Clothing Labels Among Norwegian Consumers.' *Research Journal of Textile and Apparel*, 17(1).

Lane, C. and Probert, J. (2004) *Between the Global and the Local: A comparison of the British and German Clothing Industry*. Cambridge.

Lau, S. (2017) *Style Bubble*. stylebubble.co.uk. [Online] [Accessed on 30th October 2017] http://stylebubble.co.uk.

Lea-Greenwood, G. (2013) *Fashion Marketing Communications*. Chichester: John Wiley & Sons.

LeBlanc, S. (2012) *Sustainable Fashion Design: Oxymoron No More? BSR*.

letsrecycle.com (2016) *Textiles prices 2016*. letsrecycle.com. [Online] [Accessed on 1st January 2016] http://www.letsrecycle.com/prices/textiles/textiles?prices?2016/.

Letsrecycle.com (2009) *'Positive' response to textile sorting initiative SortUK*. letsrecycle.com. [Online] [Accessed on 5th May 2017] http://www.letsrecycle.com/news/latest-news/positive-response-to-textile-sorting-initiative-sortuk/.

Letsrecycle.com (2016a) *Textiles: Prices*. letsrecycle.com. [Online] [Accessed on 7th June 2016] http://www.letsrecycle.com/prices/textiles/.

Letsrecycle.com (2016b) 'Textiles Home > Prices > Textiles' pp. 1–2.

Lindlof, T. R. and Taylor, B. C. (2011) *Qualitative communication research methods*. 3rd ed., London: SAGE.

Livesey, F. and Thompson, J. (2013) *Making At Home, Owning Abroad: A Strategic Outlook for the UK's mid-sized Manufacturers*. London.

Living Wage Foundation (2015) *The new UK Living Wage rate has been announced!* www.livingwage.org.uk. [Online] http://www.livingwage.org.uk/news/new-uk-living-wage-rate-has-been-announced.

LMB & Co (2014) 'LMB & Co Material Specification and process.'

Lockton, D., Harrison, D. and Stanton, N. A. (2010) 'The Design with Intent Method: A design tool for influencing user behaviour.' *Applied Ergonomics*. Elsevier Ltd, 41(3) pp. 382–392.

London Waste and Recycling Board (2014a) *Appendix: Literature Review*. *Textile theft : An evaluation of used textiles theft and bogus collections in London*.

London Waste and Recycling Board (2014b) *Textile theft: An evaluation of used textiles theft and bogus collections in London*.

Love Your Clothes (2015) *About: Love Your Clothes*. http://loveyourclothes.org.uk/about-love-your-clothes/.

Luginbühl, C. and Musiolek, B. (2014) *Stitched Up : Poverty wages for garment workers in Eastern Europe and Turkey*.

Luttropp, C. and Lagerstedt, J. (2006) 'EcoDesign and The Ten Golden Rules: generic advice for merging environmental aspects into product development.' *Journal of Cleaner Production*, 14(15–16) pp. 1396–1408.

Madsen, J., Hartlin, B. and Perumalpillai, S. (2007) *Mapping of Evidence on Sustainable Development Impacts that Occur in Life Cycles of Clothing*. *DEFRA*.

Manos, T. (2006) 'Value Stream Mapping — an Introduction.' *Quality Progress*, pp. 64–69.

Markkula, A. and Moisander, J. (2011) 'Discursive Confusion over Sustainable Consumption: A Discursive Perspective on the Perplexity of Marketplace Knowledge.' *Journal of Consumer Policy*, 35(1) pp. 105–125.

Marks and Spencer (2011) *How We Do Business Report*.

Marks and Spencer (2017) *Marks and Spencer*. www.marksandspencer.com. [Online]

[Accessed on 31st October 2017] http://www.marksandspencer.com.

Markusen, A. (2003) 'Fuzzy Concepts, Scanty Evidence, Policy Distance: The Case for Rigour and Policy Relevance in Critical Regional Studies.' *Regional Studies*, 37(6–7) pp. 701–717.

Matharu, G. (2010) *What Is Fashion Design?* Mies: Rotovision.

Mathews, B. (2015) 'Brand collaboration key to " closing the loop ."' *Ecotextile News*.

McEvoy, P. and Richards, D. (2006) 'A critical realist rationale for using a combination of quantitative and qualitative methods.' *Journal of Research in Nursing*, 11(1) pp. 66–78.

McGill, M. (2009) 'Carbon Footprint analysis of textile reuse and recycling,' (September).

McGill, M., Thomas, B., Voulvoulis, N. and Gronow, J. (2010) 'Streamlined Carbon Footprint Analysis of Post-Consumer Clothing and Household Textile Reuse and Recycling' p. 2009.

McKelvey, K. and Munslow, J. (2003) *Fashion Design: Process, Innovation and Practice*. Oxford: Blackwell Science.

McLaren, A. and McLauchlan, S. (2015) 'Crafting sustainable repairs: practice-based approaches to extending the life of clothes.' *In* Cooper, T., Braithwaite, N., Moreno, M., and Salvia, G. (eds) *Product Lifetimes And The Environment*. Nottingham: Nottingham Trent University.

McNamara, K. (2008) *The Global Textile and Garment Industry: The Role of Information and Communication Technologies (ICTs) in Exploiting the Value Chain*.

Michaud, J.-C., Farrant, L., Jan, O., Kjær, B., Bakas, I., Michaud, J.-C., Farrant, L., Jan, O., Kjær, B. and Bakas, I. (2010) *Environmental benefits of recycling – 2010 update*.

Minney, S. (2011) *Naked Fashion*. Oxford: NEW INTERNATIONALIST.

Mintel (2008) *Ethical and Green Retailing*.

Mintel (2009a) 'Ethical and Green Retailing - UK - September 2009.'

Mintel (2009b) *Ethical Clothing*.

Mintel (2016a) *Clothing Retailing - UK - October 2016: Attitudes Towards Buying*.

Mintel (2016b) *Clothing Retailing - UK - October 2016: Frequency of Buying Clothes*.

Mintel (2016c) *Fashion: Technology and Innovation - UK - September 2016: How People Shop for Fashion*.

Mintel (2016d) *Fast Fashion Online – What can others learn from the pureplays?*

Mintel (2016e) *Online Retailing*. *Mintel*.

Mintel (2016f) *Womenswear - UK - May 2016: Most Important Factors When Buying Clothes*.

Mintel (2016g) *Womenswear -- UK -- May 2016: Where do Women Buy Clothes?*

Mintel (2016h) *Youth Fashion - UK - December 2016*.

mistrafuturefashion.com (2017) *Mistra Future Fashion*. mistrafuturefashion.com. [Online] [Accessed on 1st January 2017] http://mistrafuturefashion.com/.

Moore, G. (2012) *Fashion Promotion*. Lausanne: AVA Publishing SA.

Morgan, C. M. and Levy, D. J. (2002) 'Psychographic Segmentation.' *Communication World*,

pp. 22–35.

Morgan, L. R. and Birtwistle, G. (2009) ‘An investigation of young fashion consumers’ disposal habits.’ *International Journal of Consumer Studies*, 33(2) pp. 190–198.

Morley, N., Bartlett, C. and McGill, I. (2009) *Maximising Reuse and Recycling of UK Clothing and Textiles - A research report completed for the Department for Environment, Food and Rural Affairs*. *DEFRA*.

Morley, N., Slater, S., Russell, S. J. and Tipper, M. J. (2006) *Recycling of low grade clothing waste*. *Oakdene Hollins, Salvation Army*.

Muller, D. and Maher, S. (2012) ‘Deadly Denim: Sandblasting in the Bangladesh Garment Industry.’

Murphy, J., Link, M. W., Childs, J. H., Tesfaye, C. L., Dean, E., Stern, M., Cohen, J., Callegaro, M. and Harwood, P. (2014) *Social Media in Public Opinion Research : Report of the AAPOR Task Force on Emerging Technologies in Public Opinion Research*.

Murray, B. (2013) *Materials Topic Guide: Embedding environmental sustainability in product design*.

Nakano, Y. (2010) *An evaluation of the potential for wider use of recycled synthetic materials in the UK High Street clothing markets: its drivers and barriers*. Northumbria University.

Niinimäki, K. (2013) *Sustainable Fashion: new approaches*. Niinimäki, K. (ed.). Helsinki: Aalto University.

Nordas, H. K. (2004) *The Global Textile and Clothing Industry post the Agreement on Textiles and Clothing*. Geneva, Switzerland.

Nordic Fashion Association (2011) *The NICE Consumer project Report*.

Norton, T. (2014) ‘A guide to traceability.’

O’Connor, C. (2015) *Cult Favorite Fashion Label Reformation Raises $ 12 Million, With Supermodel Backer (page 1)*. Forbes. [Online] [Accessed on 20th January 2017] http://www.forbes.com/sites/clareoconnor/2015/04/03/cult-favorite-fashion-label-reformation-raises-12-million-with-supermodel-backer/2/#50b901c273cf.

Oliver-Solà, J. (2010) ‘Prosperity without Growth? – The transition to a sustainable economy.’ *Journal of Cleaner Production*, 18(6) pp. 596–597.

Osterwalder, A. and Pigneur, Y. (2010) *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, New Jersey: John Wiley & Sons.

Pallant, J. (2013) *SPSS Survival Manual*. 5th ed., Maidenhead: Open University Press.

Palm, D., Elander, M., Watson, D., Kiørboe, N., Salmenperä, H., Dahlbo, H., Moliis, K., Lyng, K.-A., Valente, C., Gíslason, S., Tekie, H. and Rydberg, T. (2014) *Towards a Nordic textile strategy*. Copenhagen: Nordic Council of Ministers.

Páramo (2016) ‘Paramo Recycling Scheme: Superior Garments With A Lifetime Guarantee.’

Parker, L. (2013) ‘Fashion Brands and Workers’ Rights.’ *In* Fletcher, K. and Tham, M. (eds) *Routledge Handbook of Sustainability and Fashion*. Hoboken: Taylor and Francis, pp. 210–220.

Patagonia (2017) *Patagonia Outdoor Clothing & Gear*. eu.patagonia.com. [Online] [Accessed on 17th January 2017] http://eu.patagonia.com/enGB/home.

Payne, A. (2011) ‘The life-cycle of the fashion garment and the role of Australian mass

market designers.' *The International Journal of Environmental, Cultural, Economic and Social Sustainability*, 7(3) pp. 237–246.

Payne, A. (2015) 'Open- and closed-loop recycling of textile and apparel products.' *In* Muthu, S. S. (ed.) *Handbook of Life Cycle Assessment (LCA) of Textiles and Clothing*. Cambridge: Elsevier Ltd., pp. 103–123.

Pellizari, F., Scheffer, M. and Rosendo, H. (2011) *In-Depth Assessment of the Situation of the Textile and Clothing Sector in the EU and Prospects*. *EUROPEAN COMMISSION ENTERPRISE AND INDUSTRY DG*.

Pentecost, R. and Andrews, L. (2010) 'Fashion retailing and the bottom line: The effects of generational cohorts, gender, fashion fanship, attitudes and impulse buying on fashion expenditure.' *Journal of Retailing and Consumer Services*. Elsevier, 17(1) pp. 43–52.

People Tree (2017) *People Tree*. www.peopletree.co.uk. [Online] [Accessed on 17th January 2017] http://www.peopletree.co.uk/.

Phau, I. and Lo, C.-C. (2004) 'Profiling fashion innovators: A study of self-concept, impulse buying and Internet purchase intent.' *Journal of Fashion Marketing and Management*, 8(4) pp. 399–411.

Poitter, R. B. and Desai, V. (2008) *The Companion to Development Studies*. 2nd ed., Abingdon: Routledge.

Politowicz, K. (2013) *Design Lifetimes: A Manifesto for Strategic Change*.

Pookulangara, S. and Shephard, A. (2013) 'Slow fashion movement: Understanding consumer perceptions-An exploratory study.' *Journal of Retailing and Consumer Services*. Elsevier, 20(2) pp. 200–206.

Potter, A. (2008) 'Supply chain traceability.'

Rapanui (2017) *Rapanui Sustainable Fashion Brand*. rapanuiclothing.com. [Online] [Accessed on 17th January 2017] https://rapanuiclothing.com/.

redmutha.com (2016) *redmutha.com*. redmutha.com. [Online] [Accessed on 26th October 2016] http://redmutha.com/.

Reed, M. I. (2001) 'Organization, trust and control: a realist analysis.' *Organization Studies*, 22(2) pp. 201–228.

Reichel, A., Mortensen, L. F., Asquith, M. and Bogdanovic, J. (2014) *Environmental Indicator Report 2014 - Environmental Impacts of Production-consumption systems in Europe*. Ullstein, B., Saunders, P., and Mattos, H. de (eds). European Environment Agency.

Reiley, K. and DeLong, M. (2011) 'A Consumer Vision for Sustainable Fashion Practice.' *Fashion Practice The Journal of Design, Creative Process & the Fashion Industry*, 3(1) pp. 63–84.

rentez-vous.com (2017) *rentez-vous.com*. rentez-vous.com. [Online] [Accessed on 18th January 2017] https://rentez-vous.com/.

Resyntex (2015) 'Resyntex: A New Circular Economy Concept.'

Rettie, R., Burchell, K. and Riley, D. (2012) 'Normalising green behaviours: A new approach to sustainability marketing.' *Journal of Marketing Management*, 28(3/4) pp. 420–444.

Reverse Resources (2017) *Reverse Resources*. reverseresources.net. [Online] [Accessed on 24th January 2017] http://reverseresources.net/en.

Ripper, B. and Morrish, L. (2012) *Impact of Textile Feedstock Source on Value (Recovered*

Textile Feedstock).

Rockström, J. (2009) 'A safe operating space for humanity.' *Nature*.

Rogers, E. M. (2003) *Diffusion of Innovations*. 5th ed., New York: Free Press, Simon & Schuster, Inc.

RSA Action Research Centre (2013) *Investigating the role of design in the circular economy*.

Saphores, J. D. M., Nixon, H., Ogunseitan, O. A. and Shapiro, A. A. (2006) 'Household Willingness to Recycle Electronic Waste: An Application to California.' *Environment and Behavior*, 38(2) pp. 183–208.

Saunders, B. M. and Tosey, P. (2013) 'The Layers of Research Design.' *Rapport*, 14(4) pp. 58–59.

Sayer, A. (2012) 'Key Features of Critical Realism in Practice : A Brief Outline Chapter 1 : Key Features of Critical Realism in Practice : A Brief Outline The Transitive and Intransitive Dimensions.' *In Realism and Social Science*. London: SAGE, pp. 10–29.

Scaturro, S. (2008) 'Eco-tech fashion: Rationalizing technology in sustainable fashion.' *Fashion Theory: The Journal of Dress, Body & Culture*, 12(4) pp. 469–488.

Schneider, L. (2014) *Mainstreaming Sustainable Fashion - The Issues*. The Ethical Fashion Source. [Online] [Accessed on 15th September 2015] http://source.ethicalfashionforum.com/article/mainstreaming-sustainable-fashion-the-issues.

Sector Skills (2011) 'Sector Skills Assessment for the Fashion and Textiles Sector in England.' *Scenario*, (January).

Senanayake, M. M. (2004) *Mixed mass production and mass customization: Best practices for apparel*.

Sender, T. (2011a) *Women's Fashion Lifestyles - Issues in the Market*. *MINTEL*.

Sender, T. (2011b) *Women's Fashions Lifestyles*. *MINTEL*.

Sender, T. (2015) *Clothing Retailing*.

Sharma, T. D. and Hall, C. (2010) *Green PLM for fashion & apparel: Designing Profitable Eco-Labels*. *Infosys*.

Shen, B., Zheng, J.-H. J., Chow, P.-S. and Chow, K.-Y. (2014a) 'Perception of fashion sustainability in online community.' *Journal of the Textile Institute*, 105(9) pp. 971–979.

Shen, B., Zheng, J.-H. J., Chow, P.-S. and Chow, K.-Y. (2014b) 'Perception of fashion sustainability in online community.' *Journal of the Textile Institute*, 105(9) pp. 971–979.

Sheth, J. N., Sethia, N. K. and Srinivas, S. (2010) 'Mindful consumption: a customer-centric approach to sustainability.' *Journal of the Academy of Marketing Science*, 39(1) pp. 21–39.

shop.thtc.co.uk (2015) *THTC - (The Hemp Trading Company) - Eco Fashion Redefined Since 1999*. shop.thtc.co.uk. [Online] [Accessed on 7th September 2015] http://shop.thtc.co.uk/.

Sidique, S. F., Lupi, F. and Joshi, S. V. (2010) 'The effects of behavior and attitudes on drop-off recycling activities.' *Resources, Conservation and Recycling*, 54(3) pp. 163–170.

Singh, K. (2007) *Quantitative Social Research Methods*. New Delhi: Sage Publications Ltd.

Sinha, P. (2002) 'Creativity in Fashion.' *Journal of Textile and Apparel, Technology and Management*, 2(4) p. 16.

Sinha, P., Muthu, S. S. and Dissanayake, G. (2016) *Remanufactured Fashion*. Singapore: Springer.

Slotterback, J. N. and Schrand, T. (2007) 'Threadbare: The Used Clothing Trade and its Effects on the Textile Industries in Nigeria and other Subsaharan African Nations.' *In Contemporary Perspectives*.

Slywotzky, A. J. (1996) *Value Migration: How to Think Several Moves Ahead of the Competition*. Harvard Business Press.

Solid Waste District of LaPorte County (2008) *Textiles*. http://solidwastedistrict.com/textiles. [Online] [Accessed on 3rd January 2017] http://solidwastedistrict.com/textiles.

Solomon, M. R. (2013) *Consumer behavior: buying, having, and being*. Boston: Pearson.

Solomon, M. R. and Rabolt, N. J. (2004) *Consumer Behaviour in Fashion*. 2nd ed., New Jersey: Pearson Education Ltd.

Somers, C. (2015) 'Transcript from Fashion Question Time.'

Spangenberg, J. H., Fuad-Luke, A. and Blincoe, K. (2010) 'Design for Sustainability (DfS): the interface of sustainable production and consumption.' *Journal of Cleaner Production*. Elsevier Ltd, 18(15) pp. 1485–1493.

Spangenberg, J. H. and Lorek, S. (2002) 'Environmentally sustainable household consumption: From aggregate environmental pressures to priority fields of action.' *Ecological Economics*, 43(2–3) pp. 127–140.

Starrit, A. (2016) *Sweden is paying people to fix their belongings instead of throwing them away*. World Economic Forum. [Online] [Accessed on 18th January 2017] https://www.weforum.org/agenda/2016/10/sweden-is-tackling-its-throwaway-culture-with-tax-breaks-on-repairs-will-it-work.

Style Me in Seconds (2017) *Style Me in Seconds (@stylemeinseconds) • Instagram photos and videos*. www.instagram.com. [Online] [Accessed on 25th January 2017] https://www.instagram.com/stylemeinseconds/.

Summers, T. A., Belleau, B. D. and Wozniak, P. J. (1992) 'Fashion and Shopping Perceptions, Demographics, and Store Patronage.' *Clothing and Textiles Research Journal*, 11(1) pp. 83–91.

Sun, Y.-S. and Guo, S. (2013) 'Media Use, Social Comparison, Cognitive Dissonance and Peer Pressure as Antecedents of Fashion Involvement.' *Intercultural Communication Studies*, 1 pp. 117–139.

Svensson, G. (2007) 'Aspects of sustainable supply chain management (SSCM): conceptual framework and empirical example.' *Supply Chain Management: An International Journal*, 12(4) pp. 262–266.

Textile Recycling Association (2014) 'Specifications for " Charity Shop Grade " clothing and household textile collections from UK charity shops.'

Textile Recycling Association (2017) *Textile Recycling Association*. www.textile-recycling.org.uk. [Online] [Accessed on 23rd January 2017] http://www.textile-recycling.org.uk/.

The Alliance Project Team (2015a) *Repatriation of UK textiles manufacture 1*.

The Alliance Project Team (2015b) *Repatriation of UK textiles manufacture 2*.

The British Fashion Council (2015) 'London Fashion Week & British Fashion Industry Facts

& Figures.'

The Charity Retail Association (2017) *The Charity Retail Association*. www.charityretail.org.uk. [Online] [Accessed on 25th January 2017] http://www.charityretail.org.uk/.

The Great Recovery Project (2016) 'Designing for a circular economy: Lessons from The Great Recovery 2012 – 2016,' (March).

The Textile Institute (2017) *The Textile Institute - The worldwide professional association for people working with fibres and fabrics, clothing and footwear, interior and technical textiles.* www.texi.org. [Online] [Accessed on 23rd January 2017] http://www.texi.org/.

The UK Fashion and Textile Association (2013) *UKFT Manifesto 2013*.

Thomas, R. (1997) *Quantitative Methods For Business*. London: Prentice Hall.

Thomas, S. (2008) 'From Green Blur to Ecofashion: Fashioning an Eco-lexicon.' *Fashion Theory: The Journal of Dress, Body & Culture*. Berg Publishers, 12(4) pp. 525–540.

Tojo, N., Kogg, B., Kiørboe, N., Kjær, B. and Aalto, K. (2012) *Prevention of Textile Waste*.

UK Parliament (2005) 'Securing the future: delivering UK sustainable development strategy.' *CM6467, London*.

United Nations (1972) *Declaration of the United Nations Conference on the Human Environment*.

United Nations (2016) *Sustainable Development Goals*. United Nations. [Online] [Accessed on 20th July 2016] http://www.un.org/sustainabledevelopment/sustainable-development-goals/.

upcycling-fashion.com (2015) *Upcycling Fashion Store*. upcycling-fashion.com. [Online] [Accessed on 7th September 2015] http://upcycling-fashion.com/category/upcycling-fashion-store/.

Vaughan, A. (2015) *Earth day: leading scientists say 75% of known fossil fuels must stay underground*. www.theguardian.com. [Online] [Accessed on 28th April 2015] http://www.theguardian.com/environment/2015/apr/22/earth-day-scientists-warning-fossil-fuels-.

vinspired.com (2016) *vinspired.com*. vinspired.com. [Online] [Accessed on 26th October 2016] https://vinspired.com/.

Waste Online (2010) *Waste Online textiles recycling information sheet*. [Online] [Accessed on 2nd February 2012] http://www.wasteonline.org.uk/.

Wastemapping (2017) *Wastemapping*. reuse.ee. [Online] [Accessed on 25th January 2017] http://reuse.ee/.

Watson, M. Z. (2013) 'An Exploratory Study of the Decision Processes of Fast versus Slow Fashion Consumers.' *Journal of Fashion Marketing and Management*, 17(2) p. 1.

Wikgren, M. (2005) 'Critical realism as a philosophy and social theory in information science?' *Journal of Documentation*, 61(1) pp. 11–22.

Wild, R. (1997) *Production and Operations Management*. 5th ed., New York: Cassell.

Williamson, I. (2012) 'The Re-use Agenda & WRAP.'

Wong, Q. (2016) *8 Instagram Accounts Changing The Image Of Sustainable Fashion*. ethicalfashionforum.com. [Online] [Accessed on 30th October 2017]

http://source.ethicalfashionforum.com/article/8-instagram-accounts-changing-the-image-of-sustainable-fashion.

Woolridge, A. C., Ward, G. D., Phillips, P. S., Collins, M. and Gandy, S. (2006) 'Life cycle assessment for reuse/recycling of donated waste textiles compared to use of virgin material: An UK energy saving perspective.' *Resources, Conservation and Recycling*, 46(1) pp. 94–103.

Workman, J. E. and Cho, S. (2012) 'Gender, Fashion Consumer Groups, and Shopping Orientation.' *Family and Consumer Sciences Research Journal*, 40 pp. 267–283.

World Commission on Environment and Development (1987) *Our Common Future*.

wornagain.info (2015) *Worn Again*. wornagain.info. [Online] [Accessed on 7th September 2015] http://wornagain.info/.

WRAP (2009) 'CASE STUDY CO-MINGLED KERBSIDE TEXTILE COLLECTION: Southend on Sea' pp. 6–9.

WRAP (2010) 'Textiles Circular Economy.'

WRAP (2012a) 'CASE STUDY Joint contract for textile collection bring services' pp. 21–23.

WRAP (2012b) 'CASE STUDY "RECAP – Wear it, Love it, Share it!"' pp. 15–20.

WRAP (2012c) *Valuing Our Clothes*.

WRAP (2015a) *Innovative Business Models*. www.wrap.org.uk. [Online] [Accessed on 9th June 2015] http://www.wrap.org.uk/node/13052/#b.

WRAP (2015b) *Our vision: WRAP UK*. www.wrap.org.uk/content/about-us.

WRAP (2016a) *Materials Pricing Report*. www.wrap.org.uk/content/materials-pricing-report. [Online] [Accessed on 4th January 2017] www.wrap.org.uk/content/materials-pricing-report.

WRAP (2016b) *Materials Pricing Report – material grade definitions*.

WRAP (2016c) *Textiles Market Situation Report*.

www.antiformonline.co.uk (2015) *Antiform*. www.antiformonline.co.uk. [Online] [Accessed on 7th September 2015] http://www.antiformonline.co.uk/.

www.aquafil.com (2017) *Aquafil - group*. www.aquafil.com. [Online] [Accessed on 18th January 2017] http://www.aquafil.com/.

www.cash4clothes.co.uk (n.d.) *www.cash4clothes.co.uk*. [Online] [Accessed on 2nd October 2013] http://www.cash4clothes.co.uk/.

www.ecofashiontalk.com (2015) *Eco Fashion Talk*. www.ecofashiontalk.com. [Online] [Accessed on 7th September 2015] http://www.ecofashiontalk.com/.

www.econyl.com (2017) *ECONYL® - Sustainable materials for yarn and plastic goods production*. www.econyl.com. [Online] [Accessed on 18th January 2017] http://www.econyl.com/.

www.ecouterre.com (2017) *Ecouterre*. www.ecouterre.com. [Online] [Accessed on 30th October 2017] http://www.ecouterre.com/.

www.ethicalfashionforum.com (2017) *Ethical Fashion Forum*. www.ethicalfashionforum.com. [Online] [Accessed on 30th October 2017] http://ethicalfashionforum.com.

www.everlane.com (2017) *Everlane*. www.everlane.com. [Online] [Accessed on 20th January 2017] https://www.everlane.com/.

www.fromsomewhere.co.uk (2015) *From Somewhere*. www.fromsomewhere.co.uk. [Online] [Accessed on 7th September 2015] http://fromsomewhere.co.uk/.

www.futuremenders.com (2012) *Futuremenders*. www.futuremenders.com. [Online] [Accessed on 9th July 2015] http://www.futuremenders.com/.

www.goodone.co.uk (2013) *Goodone Clothing*. www.goodone.co.uk. [Online] [Accessed on 31st December 2013] http://www.goodone.co.uk/.

www.heretoday-heretomorrow.com (2015) *HERE TODAY HERE TOMORROW*. www.heretoday-heretomorrow.com. [Online] [Accessed on 7th September 2015] http://www.heretoday-heretomorrow.com/.

www.huffingtonpost.co.uk (2017) *Huffington Post*. www.huffingtonpost.co.uk. [Online] [Accessed on 30th October 2017] http://www.huffingtonpost.co.uk.

www.ifs.org.uk/ff/landfill.xls (2015) *Landfill tax*. www.ifs.org.uk/ff/landfill.xls.

www.igcohen.com (2013) *I&G Cohen*. www.igcohen.com. [Online] [Accessed on 28th August 2013] http://www.igcohen.com/index.html.

www.inclusi.co (2015) *Inclusi*. www.inclusi.co. [Online] [Accessed on 7th September 2015] http://www.inclusi.co/.

www.lancaster.ac.uk (2015) *Lancaster University UK Knowledge Exchange Fellowships, Faculty of Arts and Social Sciences Enterprise Centre*. www.lancaster.ac.uk. [Online] [Accessed on 7th September 2015] http://www.lancaster.ac.uk/fass-enterprise-centre/academia/case-studies/middleton.htm.

www.lmb.co.uk (2015) *LMB Textile Recycling*. [Online] [Accessed on 7th September 2015] http://www.lmb.co.uk/.

www.marieclaire.co.uk (2017) *Marie Claire*. www.marieclaire.co.uk. [Online] [Accessed on 30th October 2017] http://www.marieclaire.co.uk.

www.nosuchthing.clothing (2015) *NO SUCH THING*. www.nosuchthing.clothing. [Online] [Accessed on 7th September 2015] http://www.nosuchthing.clothing/.

www.nosuchthing.clothing (2016) *www.nosuchthing.clothing*. www.nosuchthing.clothing. [Online] [Accessed on 26th October 2016] http://www.nosuchthing.clothing/.

www.nrs.co.uk (2014) *National Readership Survey: Social Grade*. www.nrs.co.uk. [Online] [Accessed on 25th September 2014] http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/.

www.refinery29.uk (2017) *Refinery 29*. www.refinery29.uk. [Online] [Accessed on 30th October 2017] http://www.refinery29.uk.

www.speedo.com (2017) *Speedo*. [Online] [Accessed on 15th March 2012] http://www.speedo.com/en/.

www.thefaraworkshop.org (2015) *The FARA Workshop*. www.thefaraworkshop.org. [Online] [Accessed on 7th September 2015] http://www.thefaraworkshop.org/.

www.theguardian.com (2017) *The Guardian*. www.theguardian.com. [Online] [Accessed on 30th October 2017] https://www.theguardian.com/uk.

www.thereformation.com (2017) *Reformation*. www.thereformation.com. [Online] [Accessed on 20th January 2017] https://www.thereformation.com/.

www.tomcridland.com (2017) *Tom Cridland: The World's Number 1 Sustainable Fashion Brand*. www.tomcridland.com. [Online] [Accessed on 18th January 2017]

https://www.tomcridland.com/.

www.traid.org.uk (2015) *TRAID*. www.traid.org.uk. [Online] [Accessed on 7th September 2015] http://www.traid.org.uk/.

www.traidremade.com (2012) *TRAIDremade*. www.traidremade.com. [Online] [Accessed on 31st May 2012] http://www.traidremade.com/.

www.vogue.co.uk (2017) *Vogue*. www.vogue.co.uk. [Online] [Accessed on 30th October 2017] http://www.vogue.co.uk.

Yin, R. K. (2009) *Case Study Research: Design and Methods*. 4th ed., London: SAGE.

Yin, R. K. (2014) *Case Study Research: Design and Methods*. 5th Editio, Los Angeles: SAGE.

Young, C., Jirousek, C. and Ashdown, S. (2004) 'Undesigned: A Study in Sustainable Design of Apparel Using Post-Consumer Recycled Clothing.' *Clothing and Textiles Research Journal*, 22(1–2) pp. 61–68.

Young, W., Hwang, K., McDonald, S. and Oates, C. J. (2010) 'Sustainable consumption: Green consumer behaviour when purchasing products.' *Sustainable Development*, 18(1) pp. 20–31.

Zane, D. M., Irwin, J. R. and Reczek, R. W. (2015) 'Do less ethical consumers denigrate more ethical consumers? The effect of willful ignorance on judgments of others.' *Journal of Consumer Psychology*. Society for Consumer Psychology.

10. Appendices

10.1 Appendix A - Textile Collection Case Study 1

10.1.1 I&G Cohen (IGC)

An interview with the director of I&G Cohen Ltd, Phil Geller (**PG**), on 20th September 2013, covered the following areas:

- The history and background of the company, plus future plans
- Collections and donations, plus related issues
- Sorting and processing, plus related issues
- Sales and customers, plus related issues

Field notes and observational notes, including comments from other members of staff within IGC, were also made at research trips throughout the two year period of study. Managing director Elliot Cohen (**EC**) was present during one of the case study visits on May 14th 2013, and David Johnson (**DJ**), IGC's business development manager, was available for comment at several of the field trips made collecting archive data. A telephone interview was also conducted with **PG** on the 8th October 2014 regarding IGC's contribution to the consumer survey questions and views on consumer donating behaviours. The following sections contain summaries of the findings from the interviews and research trips, categorised by themes within the data.

The history and background of the company

Founded in 1959, the company has grown from collecting around 30 tonnes of textiles a week in the 1990's to around 80 tonnes a week currently. The focus for the business has always been to look at areas in which the business could expand and create more value from, such as early export trade to Africa in the 1980's and the expansion of trade with Eastern Europe, after the 2004 EU enlargement.

According to **PG**, the market is now at a similar point to the 1980's, in which the market has contracted overall, with decreased demand for unsorted goods, and rising demand for sorted and graded products.

The focus for the company is now on creating as much value from sorted and graded products:

"Well, I think what we are looking to do is, as I say, focus on value. So we are looking to pull out as much as we can. To be making more and more grades. Certainly of the higher value grades."

10.1.2 Collections

At the time of this interview, IGC had three main sources of collections, which were textile banks, charity shops and local authority door-to-door collections. The textile banks are often run in association with a charity such as The British Heart Foundation and form approximately 50 to 60% of the collections. The company collect from what they estimate to be approximately 200 textile banks, spread over 60 to 70 of the 80 to 90 locations they collect textiles from in total. The vast majority of collections are made from the North of England, with a smaller number from the Midlands, and occasional collection from further away. Collections from charity shops consist of unsold stock which the charities then sell on by weight in order to raise extra funds for their causes. These form between 10 to 15% of the collections.

The company had been making door-to-door / kerbside collections since 1997, and these were viewed as the most preferential way of collecting higher yields of better quality textiles. This was due to the factor of convenience for donators. The schemes were run by local councils wishing to reduce textiles from residual household waste and peaked at around 15% of collections. Door-to-door collections have however been subject to issues with theft. Bags of clothes and textiles are left outside homes for collections are susceptible to illegal collection. These issues, plus changes in the market and disputes within the industry have led IGC to stop collecting door-to-door. This is despite creating a collection guidance document with WRAP in 2012, and despite total door-to-door collections peaking as the second highest collection category overall in 2013 for them as a company.

The focus is now on collecting from textile banks, to supply demand from Africa, Eastern Europe and Pakistan.

"The main part of our business was door-to-door. But we've had to respond to the market. So as I say, now the main part of our business is going to be Africa and Eastern Europe and Pakistan. In terms of volumes."

These collections can be on behalf of local authorities, waste management companies, not-for-profit community groups and also charities, for which a commercial participators agreement is necessary. This stipulates what they will do for the charity, how it will be done, the permissions they have and what they will pay the

charity. Charity association, through branding and the licensing of logos, is a key part of the business in encouraging better quality donations.

IGC will also buy textiles from Cash for Clothes merchants, who run shops in which the public can sell clothing by weight. It is predicted by **PG** that as the economy improves cash for clothes shops will start to close.

In addition to this, IGC buy unsold stock from charity shops by weight. The quality of this stock has fallen as charity shops are receiving goods which Cash for Clothes shops may have rejected, and are rotating their own unsold stock between more shops before selling it by weight.

It is noted by **PG** however, that when there is an association with a charity for textile bank collections or for door-to-door bag scheme collections, the quality of goods is better than for local authority led schemes. **PG** profiles donators psychologically as being more willing to give better quality goods to a charity, than to schemes in which textiles are collected alongside household recycling (door-to-door). Regarding overall quality, **PG** notes that this has definitely fallen, partly due to fast fashion and partly due to clothes being kept and worn for longer, although fast fashion has also resulted in the quantity of clothing donated to increase.

> *"So what's happened over the last few years is, you've now seen a big change in the market because, people are holding onto their clothes longer, so therefore we are getting them in slightly poorer quality."*

> *"What's happing now is that there's now more clothing available on the market, but the quality is still fast fashion quality."*

Collection related issues:

The costs of collected textiles has risen from around from £100 to £130 per tonne in 2004, to between £550 to £720 a tonne currently, not including the actual company costs of collecting the textiles. This is estimated to be from an extra £100 per tonne and upwards.

The company have turned down collection business recently, as the price they have been asked to pay for the textiles has been too high. **PG** is of the opinion is that the price asked for textiles currently is not what they are worth in terms of their quality:

> *"What we want is either a more economic price or we want better quality."*

There is now more used clothing available on the market, but of a poorer quality. The influence of 'fast fashion' has been instrumental to this, in which consumers purchased large quantities of low cost and poor quality garments, which were then donated or disposed of in great volume.

Bazaar Street

At the Bazaar Street site vehicles arrived at the site with collections, which were weighed on the weigh bridge, before they were either sent on to Hilton Square or then entered into the yard at Bazaar Street. In the yard the vehicles or containers of collections were unloaded into large cages, which were labelled to indicate which categories they belonged to. This label included information about the location it arrived from and what sort of collection it contained (e.g. door-to-door, kerbside etc.).

Decisions are made on which delivery of collections to send to Hilton Square or bag up at Bazaar Street according to the cost of processing each lot, and the quality of the collections. For example higher quality collections such as door-to-door are mostly processed at Bazaar Street as this then produced a high quality batch of 'original products' for sale. Kerbside collections are considered middle value and mixed rag is considered lowest value.

Hilton Square

At the Hilton Square site Vehicles arrive at the site with collections, which have been weighed on the weigh bridge at Bazaar Street, before being sent on for sorting and grading at Hilton Square. Bales of recently delivered collections are stacked by the front entrance, where there is access for one very large lorry or shipping container. The collections are unloaded from vehicles into large cages and stacked in the back left corner of the Hilton Square site, before then being taken by forklift truck over to the sorting area.

10.1.3 Sorting and Grading

Decisions on sorting are directly influenced by the current demand and market price for each type of product the company can make. It is anticipated that in future, the company will sort into increasingly specialised grades.

> *"But I think diversification is the key. We'll be making more and more products. You know we might be making… a mixed grade of crème; we might start making a summer and a winter. So the devil is in the detail."*

The company hopes to start selling more of their ‘crème’ grade in the UK, and not just to Eastern Europe, where semi-sorted product is also favoured. PG relates how selling semi-sorted product to African importer countries was unsuccessful as the low wages in these countries made it more desirable for sorters to pick out the best pieces for themselves, leaving only the lower quality garments for the company they were working for. PG describes how African used textile importers are now prepared to pay IGC a premium, well in excess of African sorting costs, for UK sorting, baling and labelling of the graded products.

The company are not prepared to expand their sorting operations overseas. Reasons given for IGC’s decision not to sort overseas were the potential lack of control with a remote operation, unsuitable for the hands on nature of their business.

The company do not currently sort into fibre type, but would not rule this out if the demand were to emerge in the market.

According to **EC**, main problems with the sorting system included getting enough throughput. Shoes and handbags slowed down the processing but the company was looking at ways of changing this, such as re-working the layout of the plant. It was proposed to move the conveyor belt to the back of the facility instead of at the side, as it is currently. This would mean it would run in the opposite direction.

In the last 18 months, IGC have combined all their sorting activities at their Bazaar Street site, moving out of the Hilton Square location. The move, which consolidated all their sorting activities, was a way of reducing the movement of goods as much as possible.

Regarding sorting staff, **EC** gave an outline of the training process. Staff were trained by spending the first 2 to 3 weeks of their employment shadowing a more experienced member of staff. They were shown how to recognise different styles of clothing and different fabrics (i.e. cotton or synthetic) for sorting. Additional staff training was recognised as being desirable.

Bazaar Street

At Bazaar Street large cages of delivered collections were brought into the warehouse by forklift truck and stacked to the left of the entrance. Individual cages were taken by forklift truck to a sorting area on the right of the entrance where any rubbish, damp textiles or bric-a-brac was removed. The contents of each cage were then bagged up into bulk bags (large sacks containing approx. 170kg). The bulk bags were suspended

inside a small cage to be filled, then sealed and labelled when full, and prepared for sale.

The bulk bags were mostly sold by container or truck in 20 tonne lots of 'original products' (unsorted collections) for sorting at their final destination.

The categories of original products are:

- Textile bank
- Door-to-door
- Mixed rag
- Charity shop
- Cash for clothes

These products are sold to customers from places such as Tunisia, Eastern Europe and some trade customers within the UK.

Hilton Square

At Hilton Square collections were unloaded from the large cages in the first sorting area, in front of the belt, and plastic bags removed. Shoes were separated out before the clothing was loaded onto a conveyor belt, which transported the garments to the next sorting stage.

Any shoes which could be paired up were done so at this stage, and unsorted shoes were taken to be sorted further. Paired shoes are sent to Africa, along with good such as handbags and belts. Unpaired / odd shoes, wellies, slippers and soft toys are sent to Pakistan.

Garments then moved along the conveyor belt and were sorted into small trolley cages. The cages were not labelled but the sorting staff all know which categories are immediately in front of them.

- From this 'conveyor belt to trolley cages' stage, leather, cloth, fleeces, jumpers and sweat / track tops and bottoms were baled directly, before the rest of the sorted cages were taken to the sorting cupboards, plus shirts, trousers and household textiles areas to be sorted further.

- Garments for the cream, classic and vintage categories were sorted into bags by the belt also. Bags were then taken by hand to the cream, classic and vintage sorting area.

The trolley cages were unloaded onto large tables in front of an area of three racks of open fronted cupboards or ‘chutes’, which opened out at the back to be emptied. Sorters selected from the table and threw the garments into the right category. This was done extremely quickly; however all the cupboards are labelled.

The first area of sorting cupboards, to the right of the conveyor belt, comprised of around 40 separate children’s categories. The next two areas of sorting cupboards, to the right of the children’s cupboards, comprised of the adult category cupboards, which similarly, had a large table for cages to be unloaded onto and three racks of cupboards, for the clothes to be sorted into. Both of the adult cupboard areas had duplicates of around 40 separate categories each.

From the conveyor belt, especially good items, which are ‘like new’, clean and in modern styles or vintage items were bagged separately. These bags are then taken by hand to a room to be sorted into the ‘Crème’, ‘Classic’ and ‘Vintage’ categories. Garments were sorted into each category, folded neatly and re-bagged, then taken to be loaded into cages, ready to be shipped, stored in an adjoining room, or further sorted at Bazaar Street (vintage).

Market traders and independent sellers also came to the facility to go through sorted garments to buy by weight to re-sell. They choose from items pulled out of the ‘crème’ and ‘classic’ sort.

Garments in the vintage category were sorted into around 33 different categories, as well as items put aside for regular vintage wholesale customers. After being sorted at the Hilton Square site, vintage garments were then sent to the Bazaar Street site to be sorted further.

Shoes were separated out before the belt into large tonne bags, and taken to be paired up in a separate area of the facility, by the stacked bales. Sorters matched up pairs in adults, children’s and branded, and bag each category together. Branded shoes included trainers by large brands such as Nike and Adidas. Odd shoes were placed together in a separate bag.

Once prepared, bags and bales of similar categories were placed together in cages, ready to be shipped out.

Vintage

Bags of vintage items from Hilton Square were brought over after being sorted into the general categories. Deliveries were brought to the wholesale vintage boutique whenever a driver is free. The member of staff from Hilton Square responsible for sorting the vintage textiles came over to Bazaar Street every Friday to help the vintage wholesale manager with further sorting and preparing.

Deliveries were brought over in bags then emptied out and sorted into the individual item types and by season. E.g. belts / bags / hats / summer dresses / winter dresses / jumpers. The seasonal items that were not needed for that particular season were stored as stock. For example, several cages of jumpers in bags were being stored in the vintage warehouse during the visit in May.

Any items that need steaming were steamed and hung on rails just outside the vintage boutique, before being transferred to the appropriate rail inside the boutique. Specific cages for items set aside for regular wholesale customers were also located just outside the boutique.

By the stairway entrance there is a platform of vintage items sold by weight. These were items that had been classed as not good enough to be sold individually in the boutique or that had been in the boutique too long and not sold.

Waste

In the Hilton Square there were approximately 28 large bales of wet garments which had been there since August 2012. There was no provision to clean and dry clothes at this facility. There had been trials of sending large quantities to be cleaned and dried at a facility in Scotland but this proved too expensive in practice. There were also many wet bales stored at Bazaar Street, as at Hilton Square. The wet bales at Bazaar Street had been used to create a temporary wall dividing up part of the warehouse and have been stored at the facility for approx. 2 years or more. Wet bales are a particular problem for the business as once garment bales get wet there is nowhere to dry them and they cannot be used. Damaged or soiled individual garments also cannot be used either. Problems have also occurred during sorting when knives and syringes had been found in the collected garments.

10.1.4 Packaging, Baling and Storing

Bazaar Street

At Bazaar Street there were bales and bulk bags of quilts stacked in one part of the warehouse. These bulk bags are labelled **Q**. Bulk bags containing door-to-door are labelled **D2D**, cash for clothes – **C4C** and textile bank – **TB.** There were approx. 120 bulk bags in a load prepared for sale.

Hilton Square

When a category cupboard was full it was emptied into a black bin on wheels, with the appropriate label tucked in to a corner from a folder on the cupboard door. Cupboards were judges full by eye, and emptied into the black bins to make up 55kg bales. Loads can be made up from more than one cupboard.

Each bin was weighed on a hand operated fork lift/pallet truck device or on floor scales to make sure it is 55kg, and then wheeled over to the bale press, on the left hand side of the conveyor belt, to be made into a 55kg bale.

The loads were labelled with a category and contents label in white or yellow, depending on the quality and grade and composition. This label was also used to label the wrapped and pressed bale. Bales were then stacked near the front entrance of the facility, ready to be loaded on to vehicles and containers when orders were made. Six small 55kg bales were strapped together in the large bales ready to be shipped.

10.1.5 Distribution

Goods were sold by category and weight and packed into shipping containers to be sent overseas.

Sales

IGC work directly with their customers to produce products which are sorted and graded to their own specifications. Customers come over to their facility, sometimes for several weeks at a time, and work with sorting staff to create their own exact specification of product. Customers are now becoming increasingly specific about what sort of products they require.

Main countries for sales include:

- Africa
- Eastern Europe
- Pakistan

- UK – IGC have recently started selling charity shops stock of sorted garments. They also supply vintage clothes shops and a limited number of UK upcyclers.

Demand for semi-sorted 'original products' had fallen greatly at the time of the research. This led to a focus on increased sorting to create more specific grades of product. Selling prices had gone up, but so had collection/purchase prices, however quality had gone down, partly due to low cost value fashion creating a glut of poor quality discarded garments.

In their sales, IGC include shipping and delivery costs in the export price of goods sent by shipping containers, however Eastern European customers normally use an 'ex works' price, arranging transportation themselves.

Seasonal patterns have been noted in the industry, with September, October and November, being the busiest times for the African market. Activity with the Eastern European market is noted as being more evenly spaced throughout the year, but with a cessation during the summer months. Collections are quieter in December but very busy during the summer months, creating surpluses when the Eastern European market is shut down.

10.1.6 Consumers

PG would most like to know what would encourage consumers to donate more reusable clothing. Currently it is understood that convenience is the major factor to encourage more donations.

> *"What is of interest to us is what would encourage people to do more, to put more reusable clothing and textiles into our industry. However it comes in.*
>
> *What do we need to do to encourage people? I am quite interested to know what we can encourage people to do more within the existing infrastructure we have now....*
>
> *Again, I would say, people are going to say easy, simple, most people are lazy so it's got to be simple and easy hasn't it?"*

He also raised queries about the reasons that some textiles end up in household residual waste, going through several possible reasons, such as lack of convenience or knowledge, poor quality and soiled or damaged textiles.

> *"Why do people put stuff in the bin? My assumption is, is because they can't be bothered. My assumption is because they don't think that a charity shop*

would take it, so therefore it is not good enough for anywhere else and the third assumption would be that they don't know what to do with it. And the fourth thing, which is probably covered a bit by the others, is that its rags, it's soiled, it's this, it's that. That might be a genuine reason for it to go in the bin. So the question is why do things go in the bin?"

Questions were also raised about how much consumers understood what happens to donated or discarded textiles, and how connected they felt to the overall impact of their actions.

"If people understood the story of the clothing would they be more willing to do something about it?

If we have a little bit more of an interest in something or we know what happens to something we are more likely to do it."

This was also echoed by **DJ** who questioned what sort of information consumers would actually like to receive regarding textile recycling and reuse. **DJ** felt it would be useful to know what information consumers found useful and not useful.

DJ also questioned whether consumers felt differently about donating to clothes to a charity compared to a commercial collector. This was a point **PG** also raised, further questioning whether consumers also donated different qualities of clothes and textiles to different collection schemes.

"Is there a difference between what they put in a textile bank in a supermarket, as opposed to in a CA (civic amenity) site? So if they go to 'the tip' do they put a different quality in?

"We want to know a bit more about what would make someone put it in a recycling bin or give it to a charity shop, rather than put it on EBay?"

"What could we do to make people put the same quality in? Could we brand the banks differently or something like that?"

"If there is company doing it as opposed to a charity, does it matter?"

Collection in retail environments was also called into question, in terms of the likely impact and behaviour change.

"It would be very interesting for us to know if you had collection points in all the retail outlets, and it became part of people's shopping habits, like it is to

go to say a charity shop, then it might impact on... it might increase what people are doing?"

10.1.7 IGC Photos

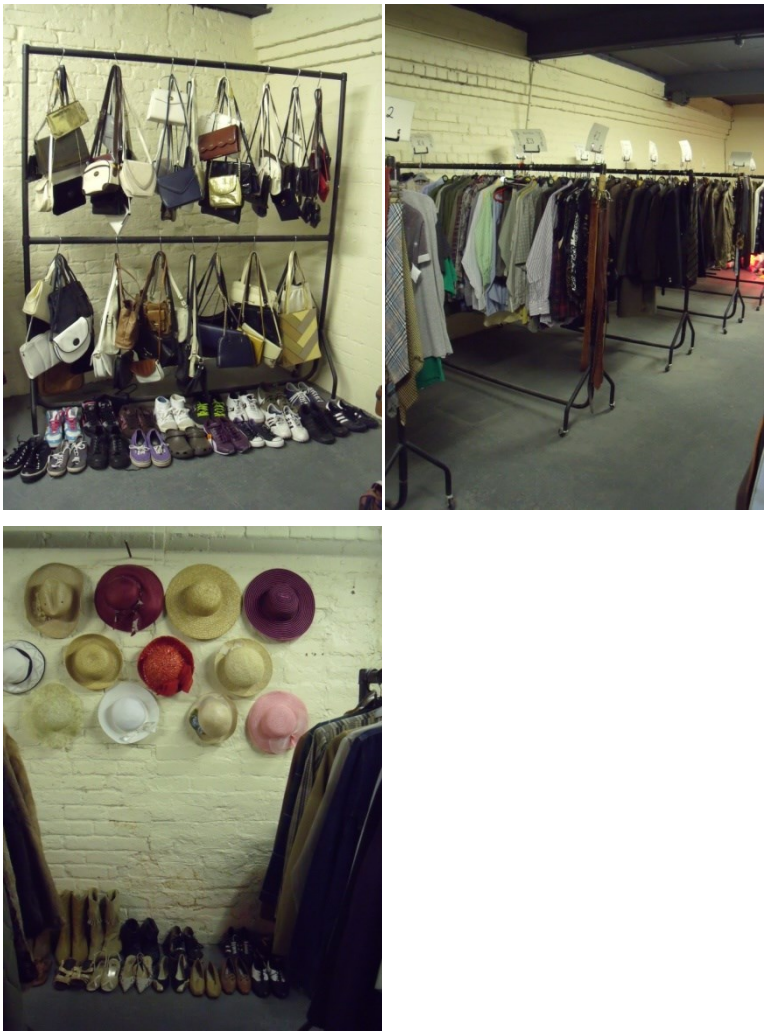


Figure 61. Wholesale vintage clothing at IGC, Bazaar Street

Collections

Figure 62. Collections delivered to IGC, Bazaar Street

Figure 63. Collections arrive at IGC, Hilton Square and are unloaded into cages.

Sorting

Figure 64. Sorting rubbish from collections before packing at IGC, Bazaar Street

Figure 65. Conveyor belt sorting into category trolley cages at IGC, Hilton Square

Packing

Figure 66. Packing into bulk bags at IGC, Bazaar Street

Figure 67. Packaging into bales at IGC, Hilton Square

Distribution

Figure 68. Bulk bags stacked and labelled for distribution at IGC, Bazaar Street

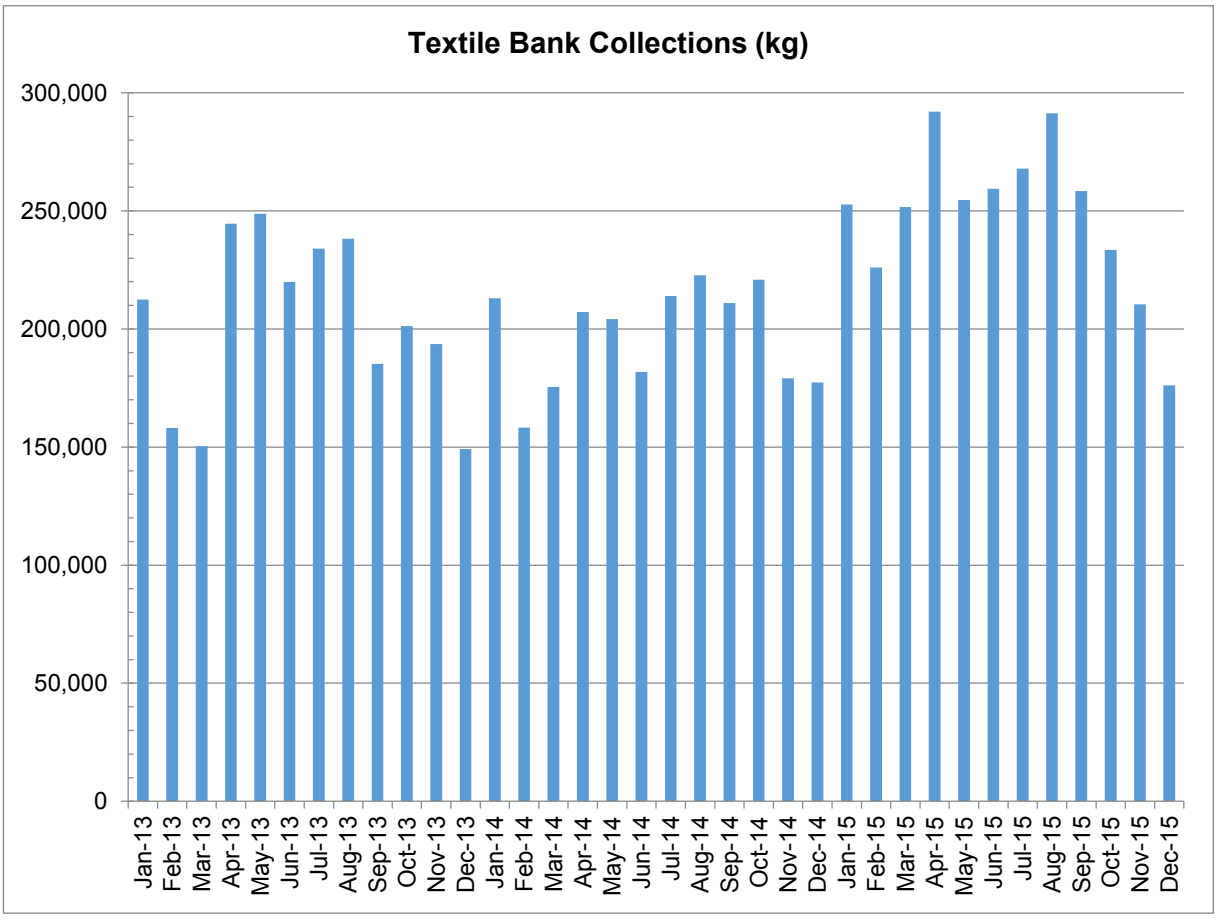
Figure 69. Bales labelled ready for distribution at IGC, Hilton Square

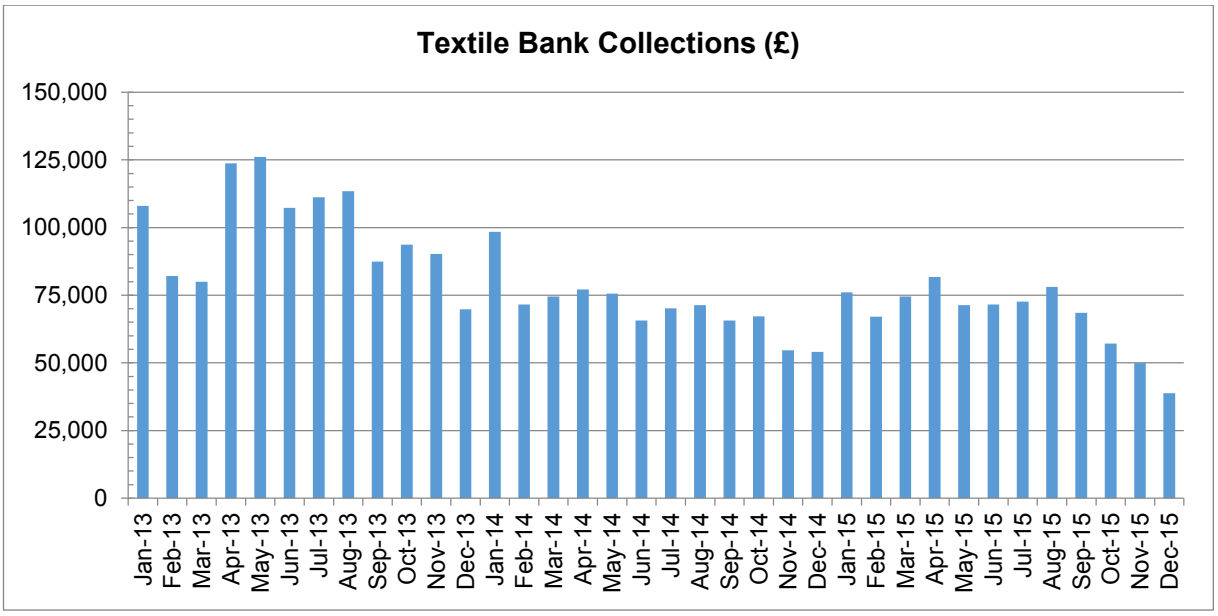
10.1.8 IGC Collections and Sales Data Charts

Collections and Goods In

There are around fifteen separate categories of goods coming into IGC for sorting, grading and resale, including the four streams of greatest quantity: textile banks, door to door collections, charity shops and cash for clothes, although two of these sources were gradually phased out over the course of the three year study. Also included are low value and low volume streams such as cardboard and duvets. Averaged out, each of the fifteen streams represents around 24,000kg of goods in per month, of mostly textile and clothing products, with an average value of around £10,000. In total IGC collect around 360,000kg per month, representing a cost to them of around £155,000 per month or £0.43 per kg. Some months provide more collections than others, with the lowest monthly amount at around 260,000kg, costing around £67,000 to collect and the highest monthly amount at around 520,000kg, costing around £312,000 to collect.

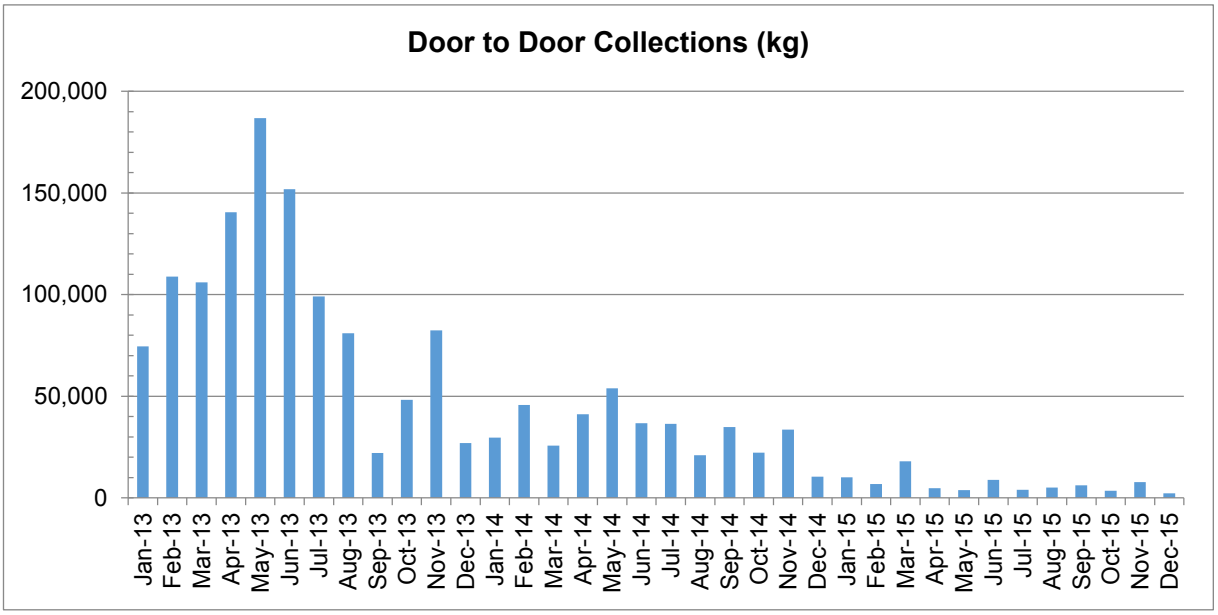
Textile Bank Collections

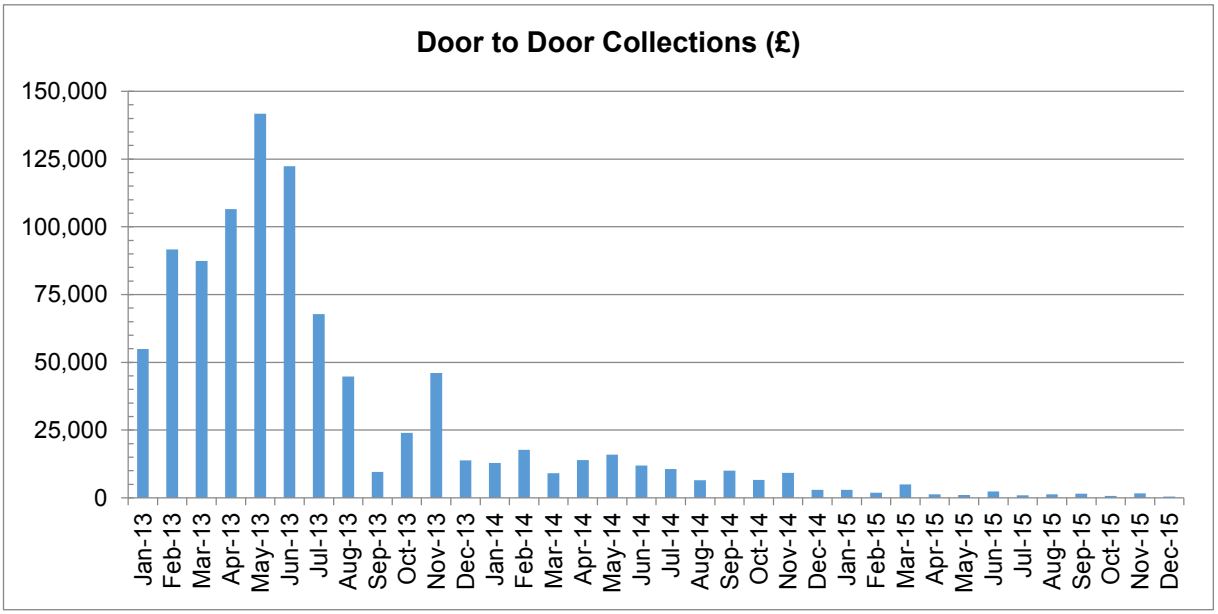




Textile Banks: As can be seen from the charts, textile bank collections have remained steady and increased in volume over the three year study period, with collection prices falling overall. Peaks can be seen around January, April and September in each year, allowing for some variation due to seasonal weather conditions and school term and holiday dates. Using the yearly January peak for comparison between each year, textile bank collections from January 2013 were at 212,500kg, remaining steady until January 2014 at 212,980kg, but then growing in January 2015 to 252,760. Textile bank collection prices however have fallen over time, costing £107,950 in January 2013, then £98,397 in January 2014 and £76,081 in January 2015. This confirms interview data with **PG**, outlining how textile bank collection were now to be the main focus of the business, creating the grade of product which they had the most demand for. The average cost for textile bank collections over the three year period was £0.37 per kg or £370 per tonne.

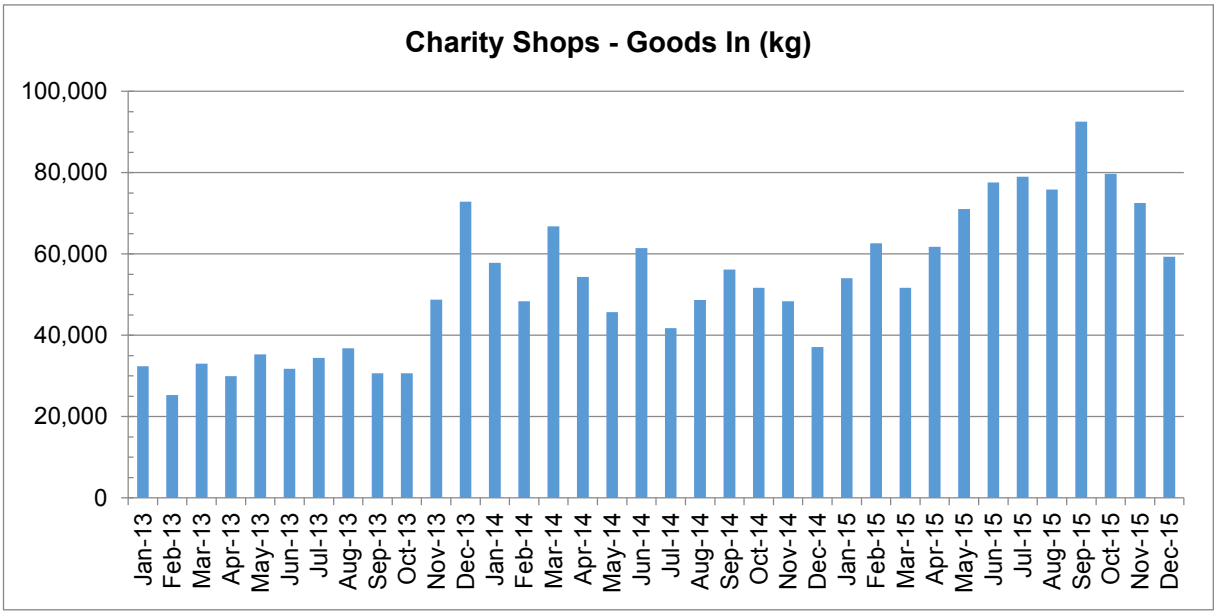
Door to Door Collections

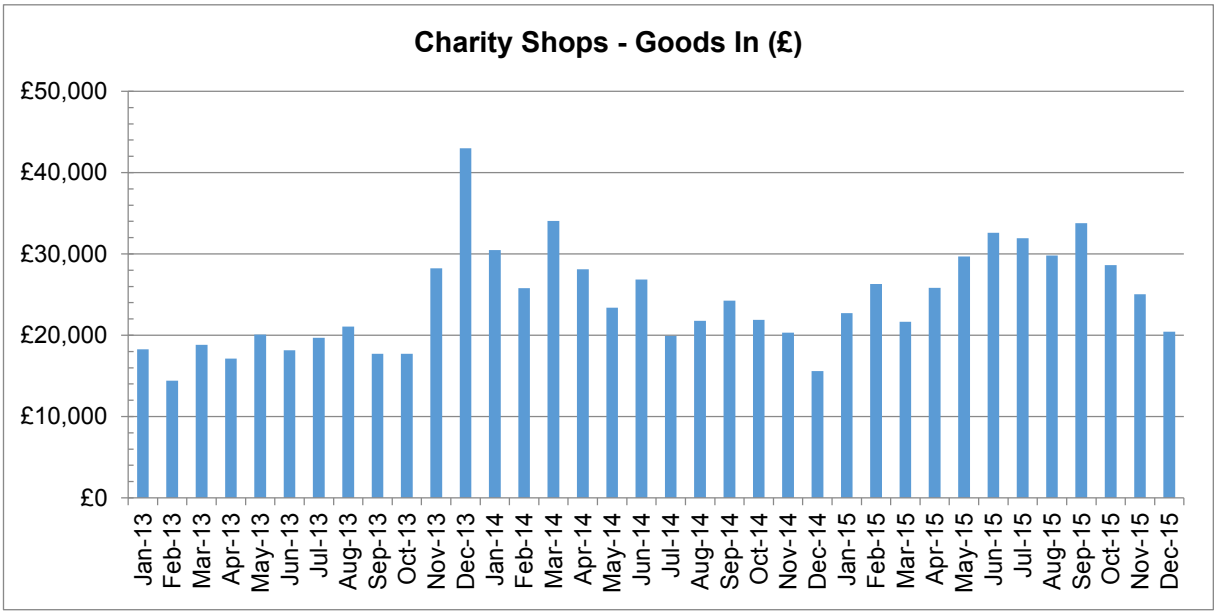




Door to Door: Amounts shown are an aggregated total of all charity, local authority and commercial door to door collections carried out by or sold to IGC. The charts show door to door collections to have declined greatly over the three years. This was as expected, again confirming interview data from **PG** stating that the business intended to cease all door to door collections due to a lack of regulation in the market, despite this method providing some of the highest quality collections of the main four streams and a peak of 186,860kg (costing £54,940 to collect) in May 2013. By the December 2015 door to door collections were down to as low as 2,200kg (costing just £440 to collect). The average cost of door to door collections over the three years was £0.60 per kg or £600 per tonne. This is much more expensive than textile bank collections and may be an extra reason why this supply became less attractive.

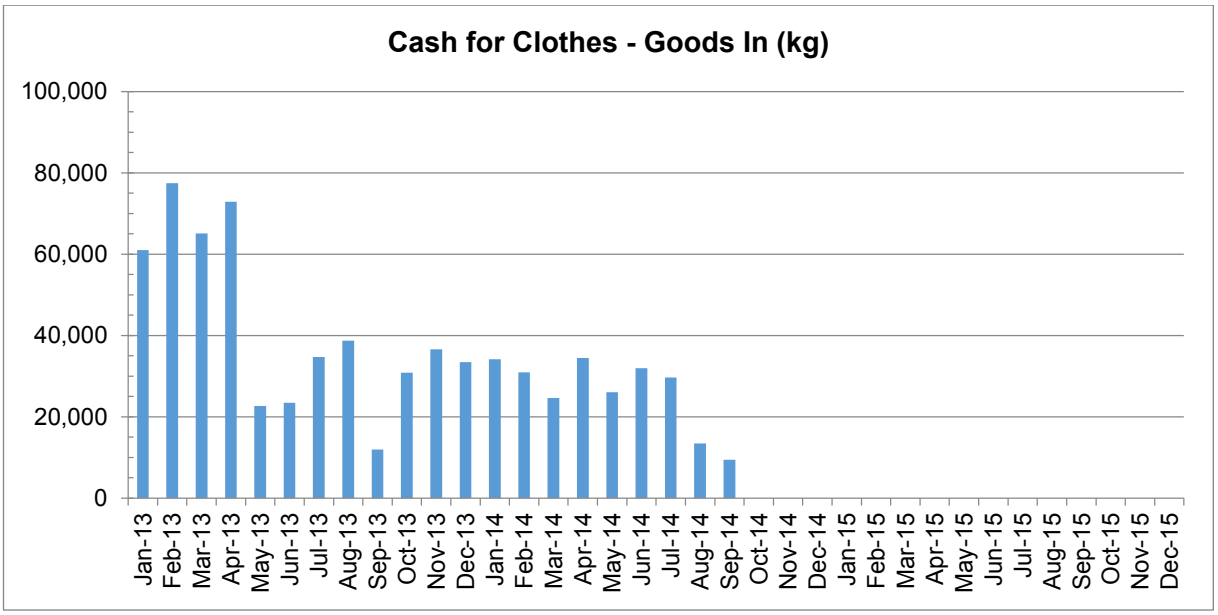
Charity Shop Goods In

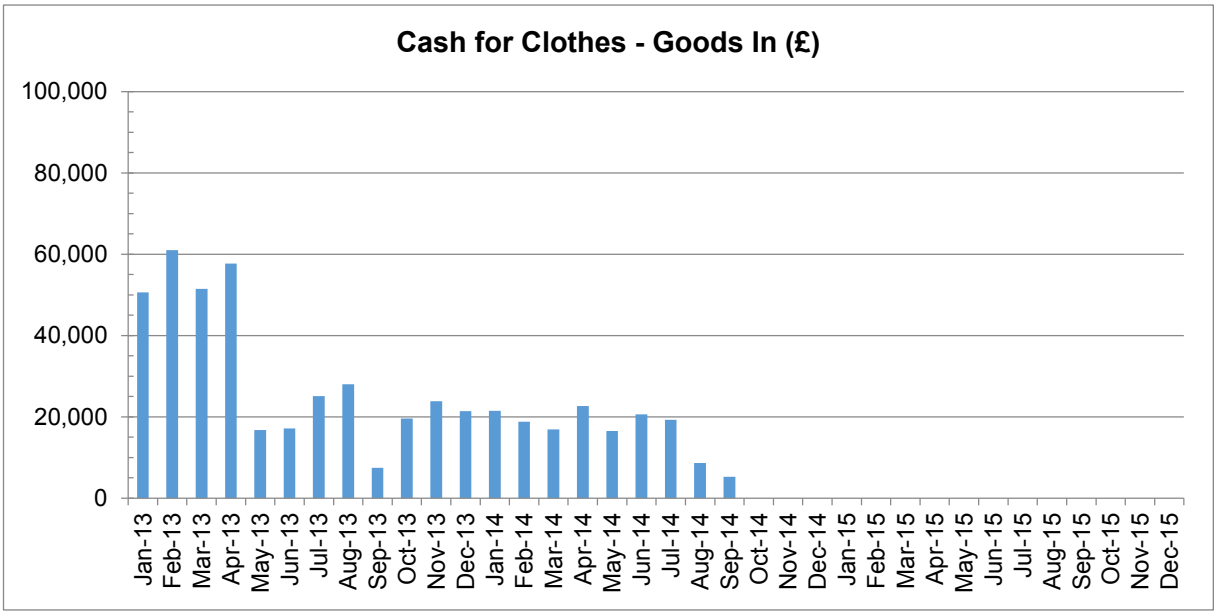




Charity Shops: Charity shop goods in have increased steadily over time. These amounts represent unsold stock in charity shops, sold to IGC by weight. Collections range from the lowest amount in February 2013 of 25,280kg (costing £14,410) to collect to the highest of September 2015 of 92,580kg (costing £24,261 to collect). This indicates a fall in the cost per kg from £0.57 to £0.26 between the lowest and highest points. **PG** had described falling quality and rising prices in 2013, so it is surprising to see that collections from this stream have increased. This may in part be due to the increasing prevalence of charity shops on UK high streets, and the increase in unsold stock from a greater number of shops, as well as the eventual falling prices.

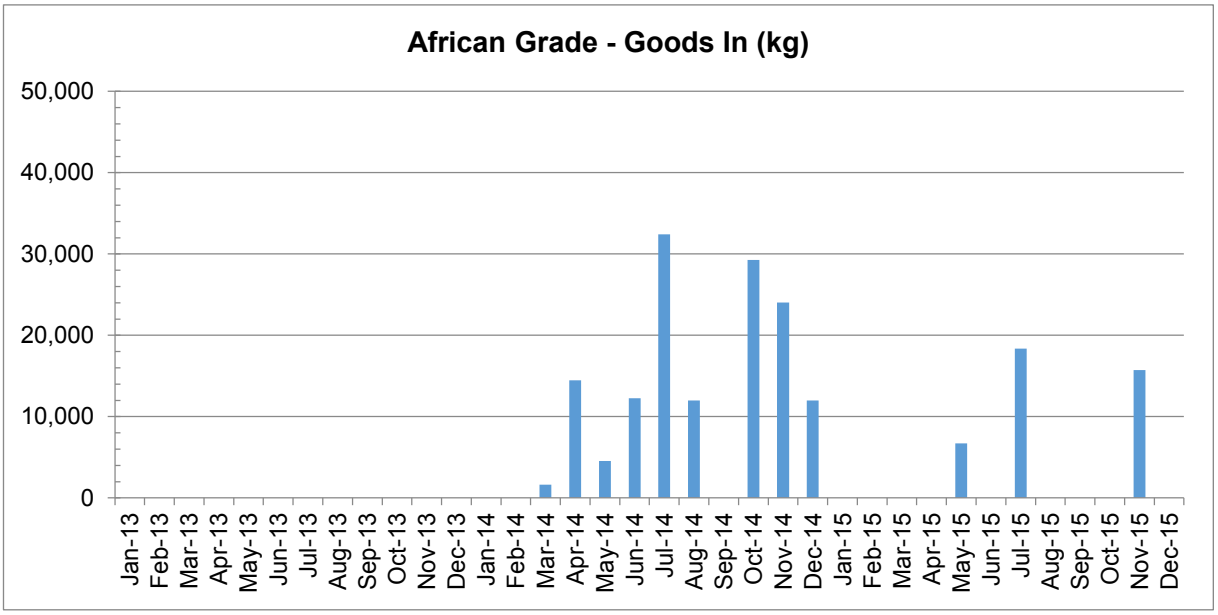
Cash for Clothes Goods In

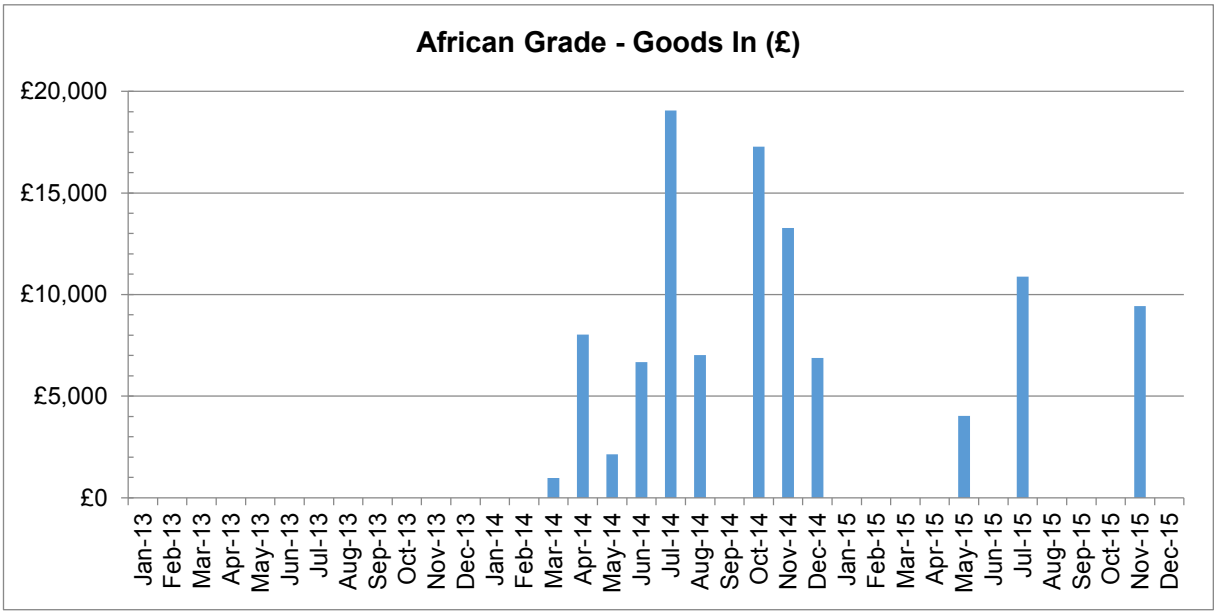




Cash for Clothes: These amounts represent used clothes and textiles sold to commercial 'Cash for Clothes' shops by weight by members of the public, and then sold on to IGC en masse. Collections from this source peaked at 77,460kg at a cost of £60,961 in February 2013, and a low of 9,420kg costing £5,256 in September 2014, before ceasing altogether. This indicates a fall in price per kg from £0.79 to £0.56. As predicted by **PG,** collections would start to fall from this stream as prices fell, as it became less worthwhile for members of the public to sell their unwanted clothes and textile by weight to a commercial organisation.

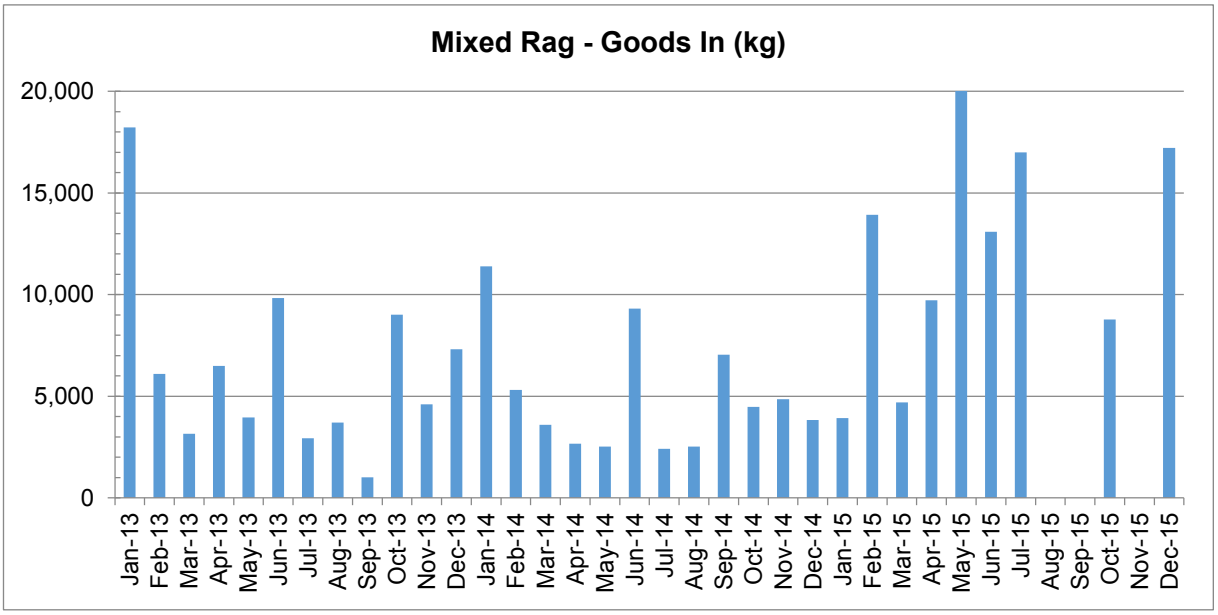
African Grade Goods In

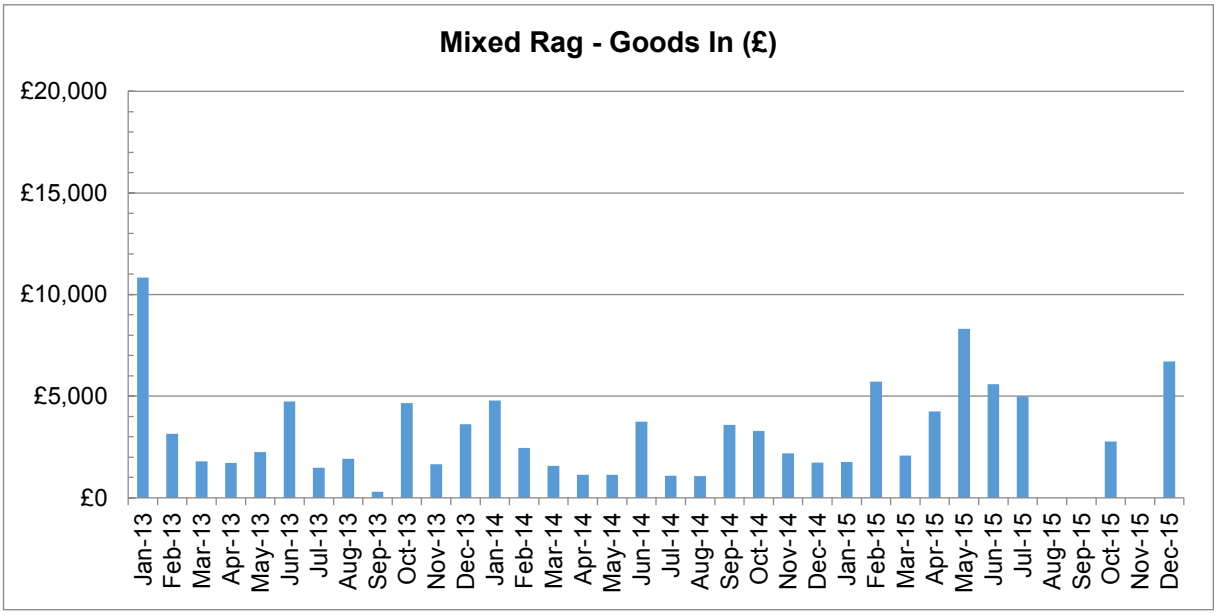




African Grade: This source represents second hand clothing collections from a commercial collector, which are sorted into the lightweight summer clothing that make up this product sale grade. The amounts are then sold by weight to IGC. Quantities arriving into IGC from this source are variable and infrequent, with the lowest amount of 1,620kg, costing £972 in March 2014 and the highest amount of 32,400kg, costing £19,051 in July 2014. The price per kg has remained relatively stable of time at around £0.60 per kg.

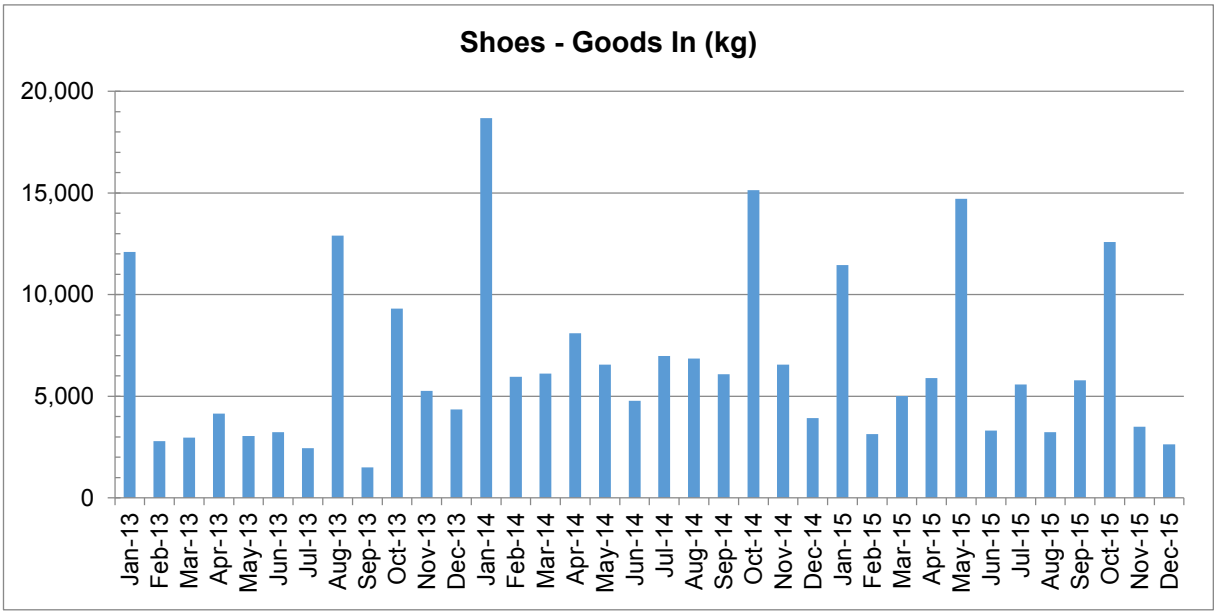
Mixed Rag Goods In

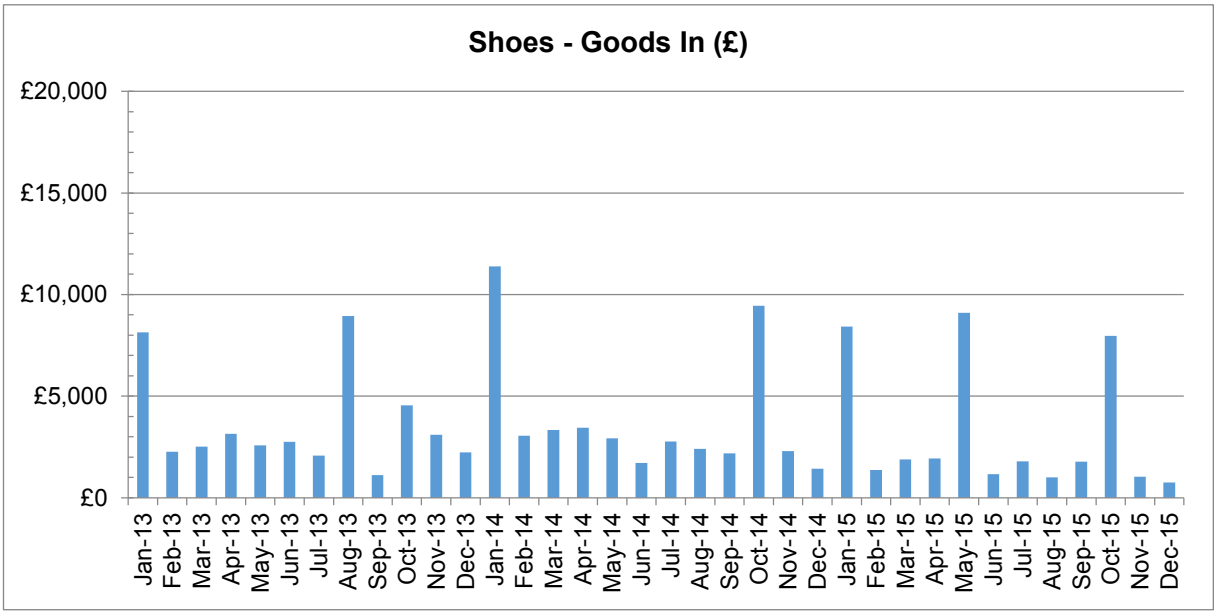




Mixed Rag: This source also represents collected quantities of second hand textiles and clothing supplied by companies within the collecting and collecting trade. Supply appears to be low but consistent over time, with quantities gradually increasing to as much as 26,480kg, at a cost of £3,747 in May 2014, with costs falling over time from around £0.60 per kg in 2013, to £0.45 per kg in 2014 to around £0.39 by the end of 2015.

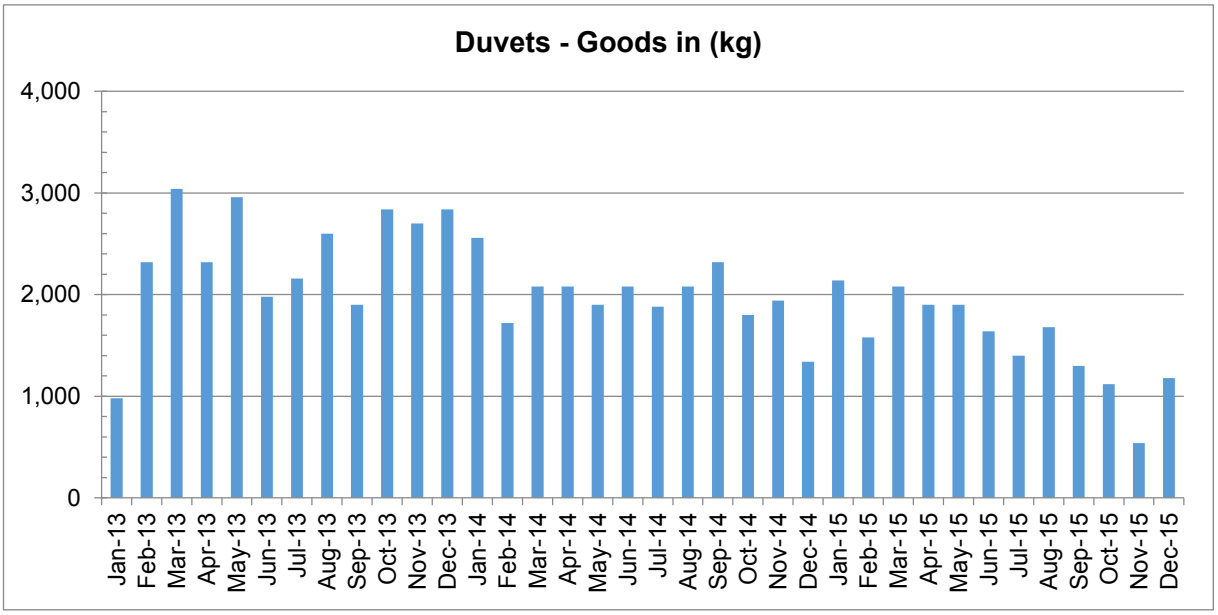
Shoes Goods In

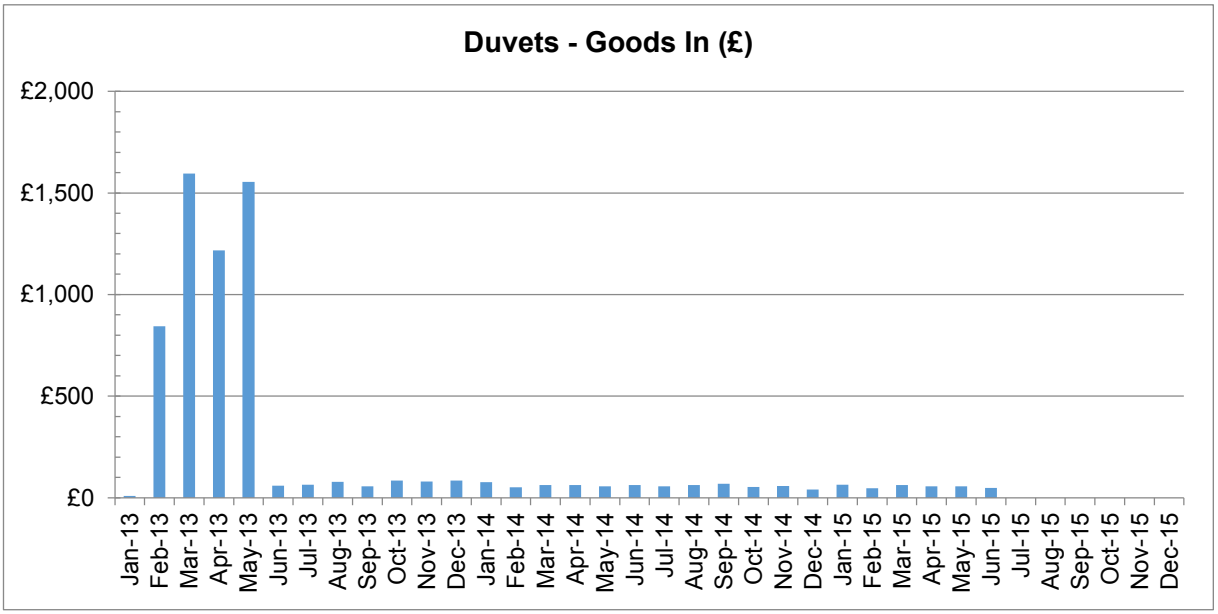




Shoes: Shoes are supplied by a commercial supplier, selling on used shoes by weight. These can be sold in lots of paired or unpaired shoes. They are also supplied as unsold stock from charity shops. As can be seen from the charts, supply of shoes remains low but consistent not exceeding more than 18,680kg at a cost of £11,388 in January 2014. Peaks occurred in January and October of each of the 3 years, and also August 2013 and May 2015. Average cost of collection was around £0.63 per kg over the three years.

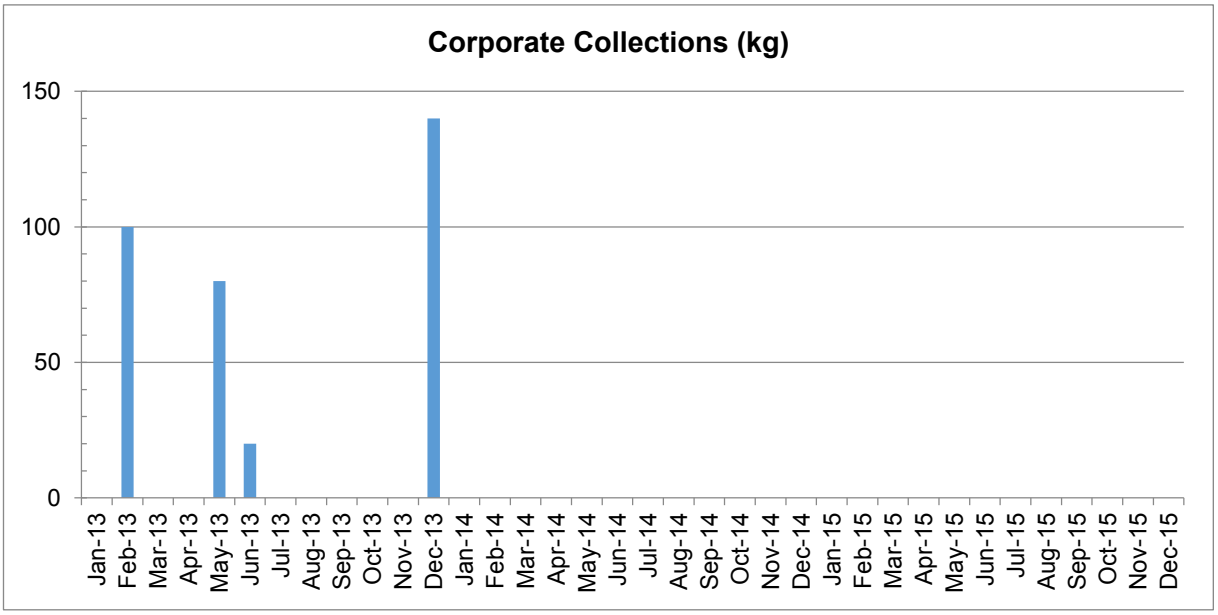
Duvets Goods In

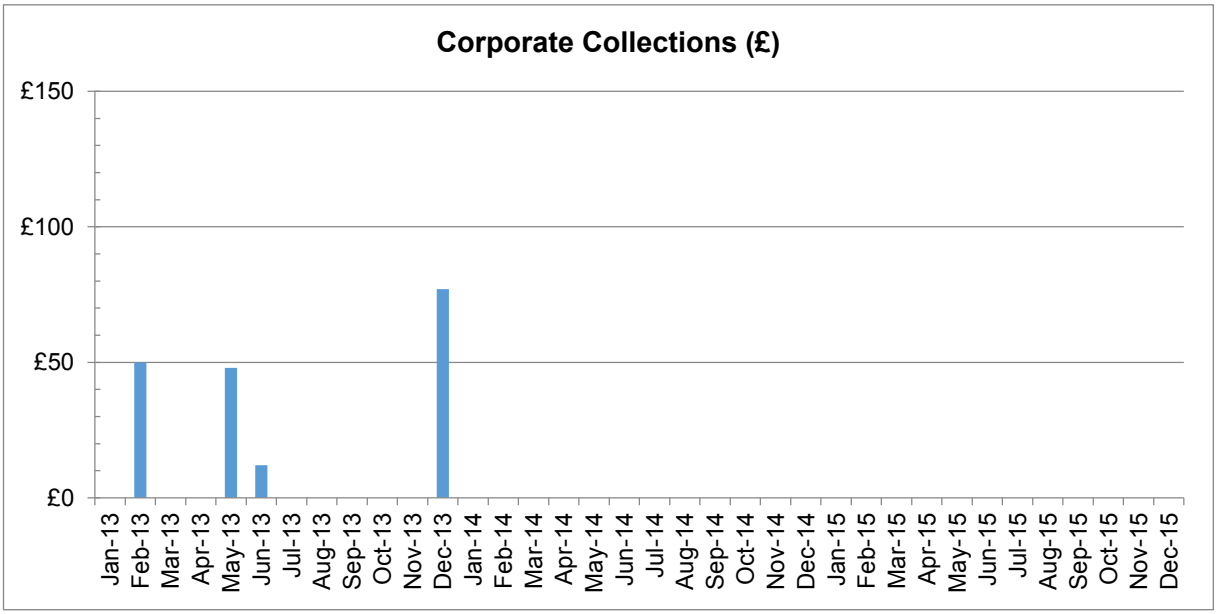




Duvets: Duvets are supplied by a waste management company, selling on second hand duvets and quilts by weight. A high proportion of duvets had originally been included with used clothing sold by weight to IGC from this particular supplier. As duvets have a much lower value than clothing it was requested that the supplier separated out the duvets for sale at a lower price. It can be seen from the charts that supply remains low and is falling from a peak of 3,040kg at a cost of £1,596 in March 2013 to a low of 540kg in November 2015 with an unrecorded or negligible cost. This supply remain problematic, as although costs are low, end markets and collecting opportunities remain scarce.

Corporate Collections



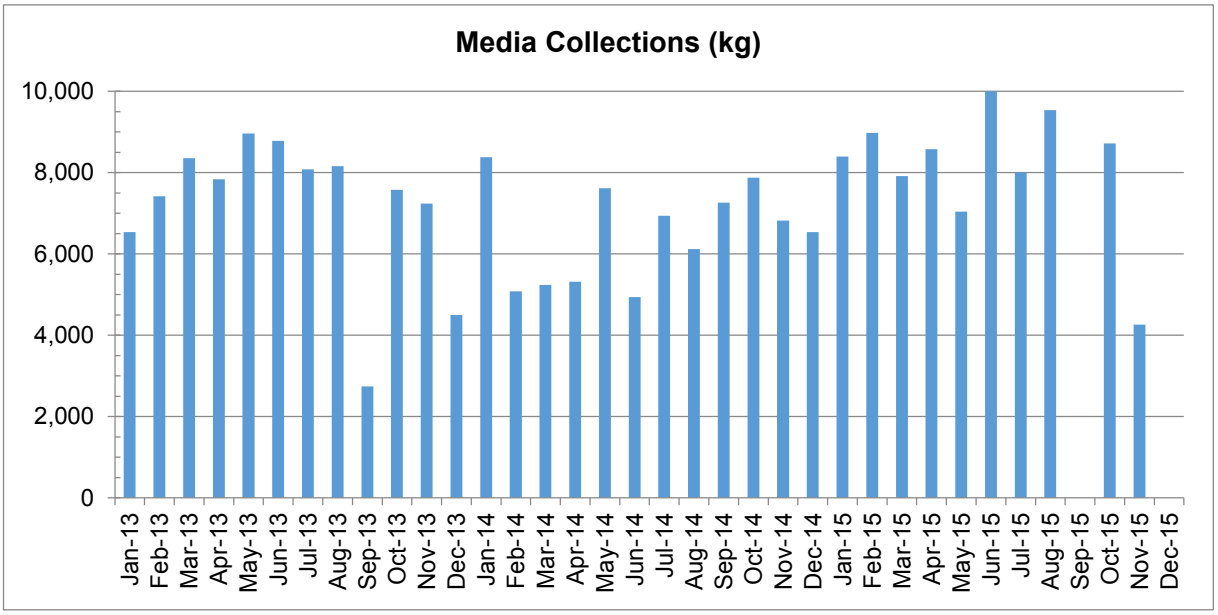


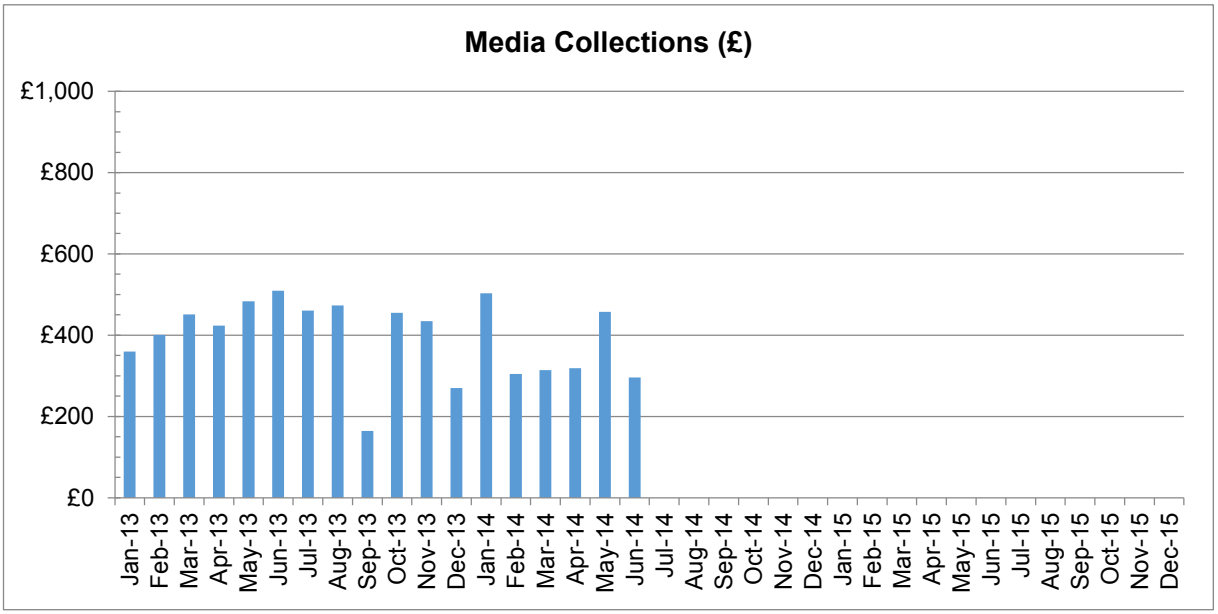
Corporate Collections: Corporate collections are individual collections made by corporate suppliers and businesses. These collections represent second hand clothes brought in by staff members within these organisations, which are then sold on to IGC by weight to raise money for charities such as The Christie Hospital. Previous clients for this service include Nikon and Barclays. Supply is inconsistent and sporadic for this source, suggesting that collecting in this way is perhaps an ad hoc service which IGC supplies on request, rather than on a regular basis.

Cash In the Closet Shops

Cash in the Closet Shops: These shops served as IGC's own 'Cash for Clothes' style shops, which purchased clothes by weight off members of the public to raise money for The Christie Hospital, and provided IGC with some first-hand research of the 'Cash for Clothes' market. Supply rapidly reduced from a low 3,080kg at a cost of £1,694 in January 2013 to only 1,020kg at a cost of £561 in April 2013, before ceasing entirely. At a cost of £0.55 per kg or £550 per tonne this low and unreliable source of supply is also more expensive than the stable and consistent textile bank collections. As can be seen from the 'Cash for Clothes – Goods In' charts, costs from this related source also fell rapidly from May 2013. This may be indicative of a situation in which such enterprises could no longer offer a worthwhile exchange price to the public.

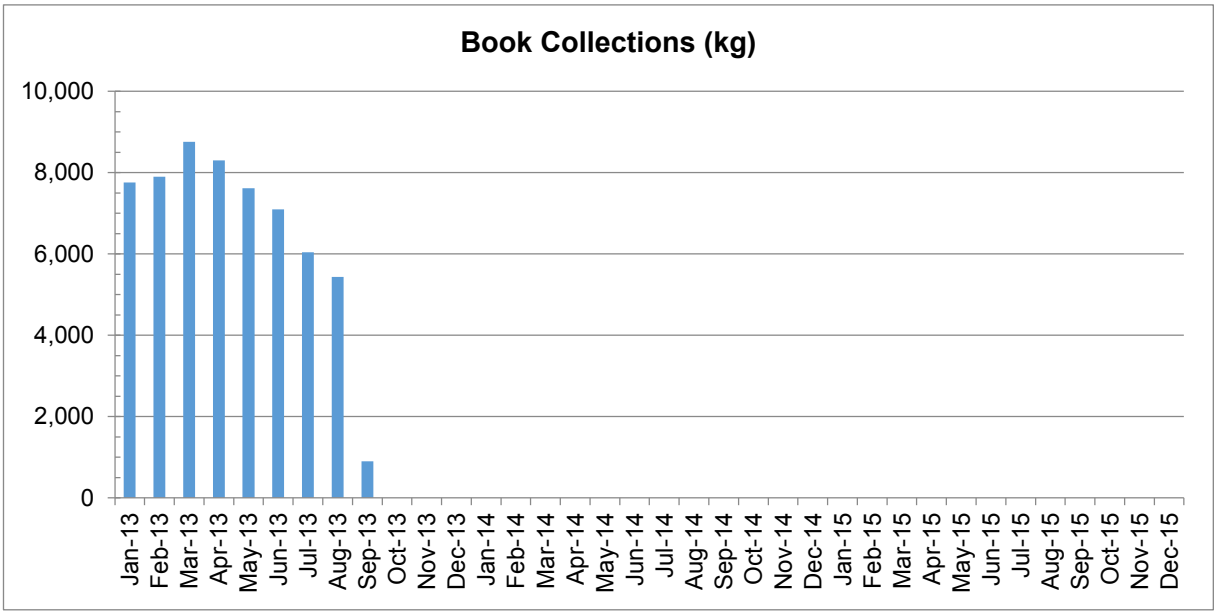
Media Collections

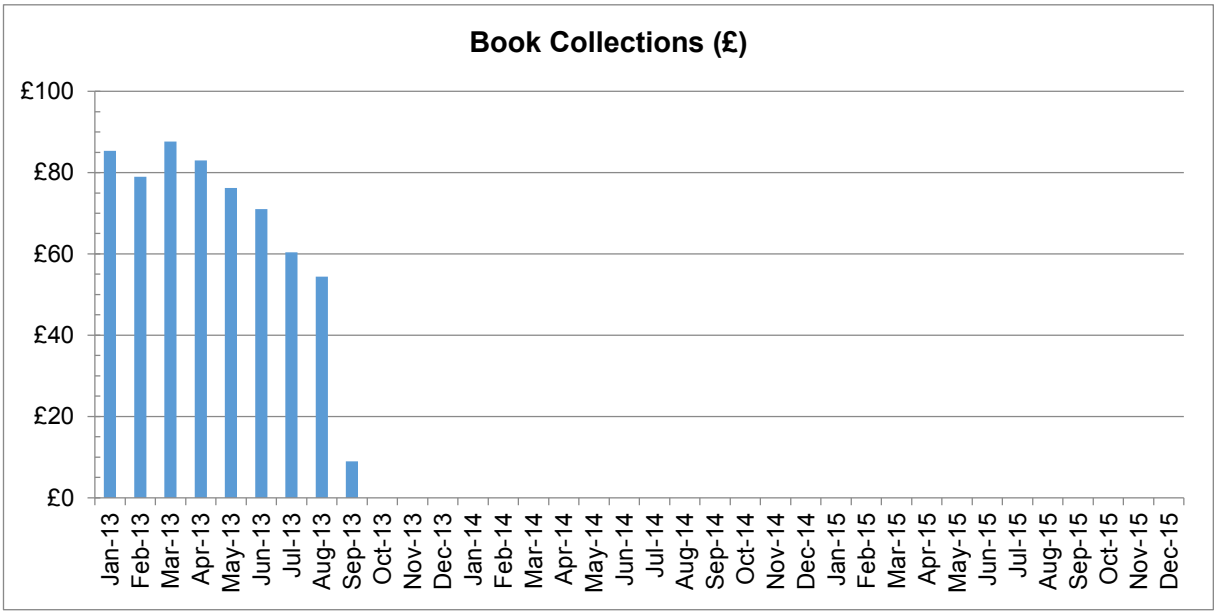




Media: These are collections from IGC's own media banks, which collect books, CDs and DVDs. Media collections have also remained low in volume, although have increased slightly over time. Interestingly costs to collect media have been shown as unrecorded or negligible since June 2014, despite the supply remaining at a relatively consistent level. This may be because collection costs from media banks are being accounted for along with collection costs from textile banks.

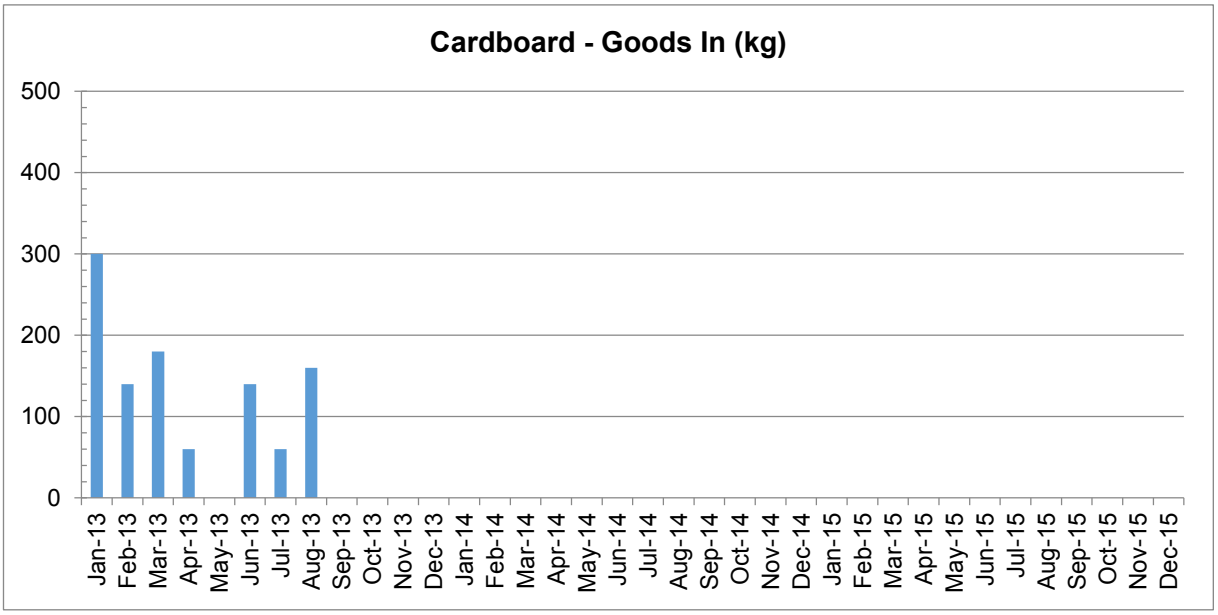
Book Collections





Books: Book collections mainly come from charity shops. As can be seen from the charts, supply of books ceased entirely in September 2013. This may be due to the extremely low price of around £0.01 that suppliers would have received for these quantities, less than the price of cardboard for recycling.

Cardboard Goods In



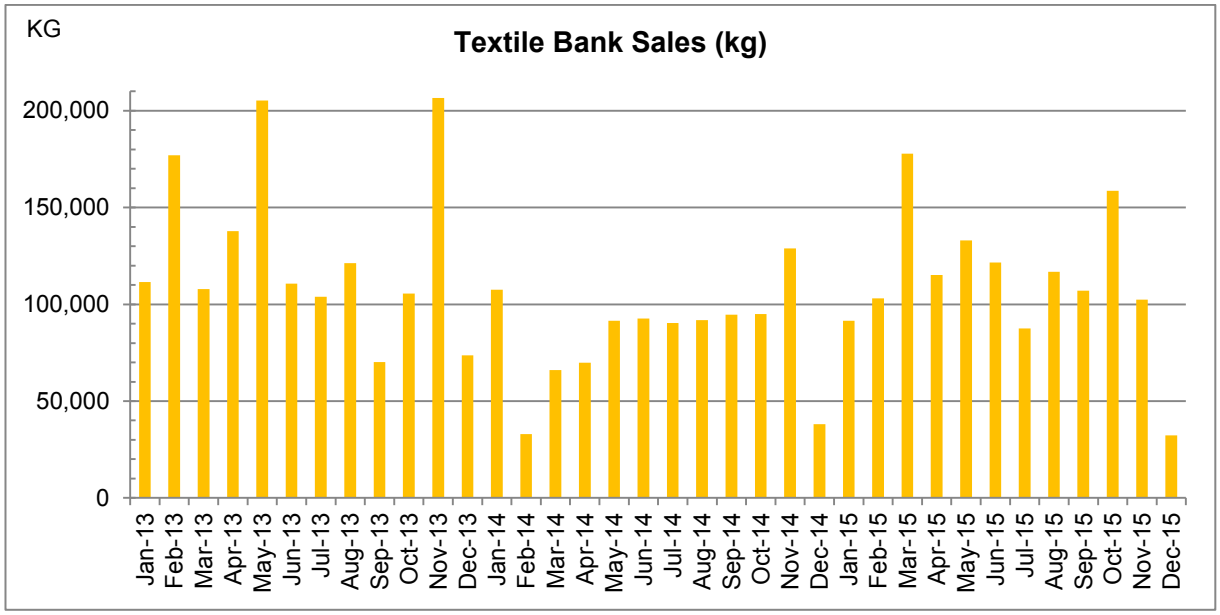
Cardboard: These quantities represent the cardboard packed around other collection and goods in categories and does not represent a purchase cost to IGC. The cardboard is then sold on at extremely low value for recycling.

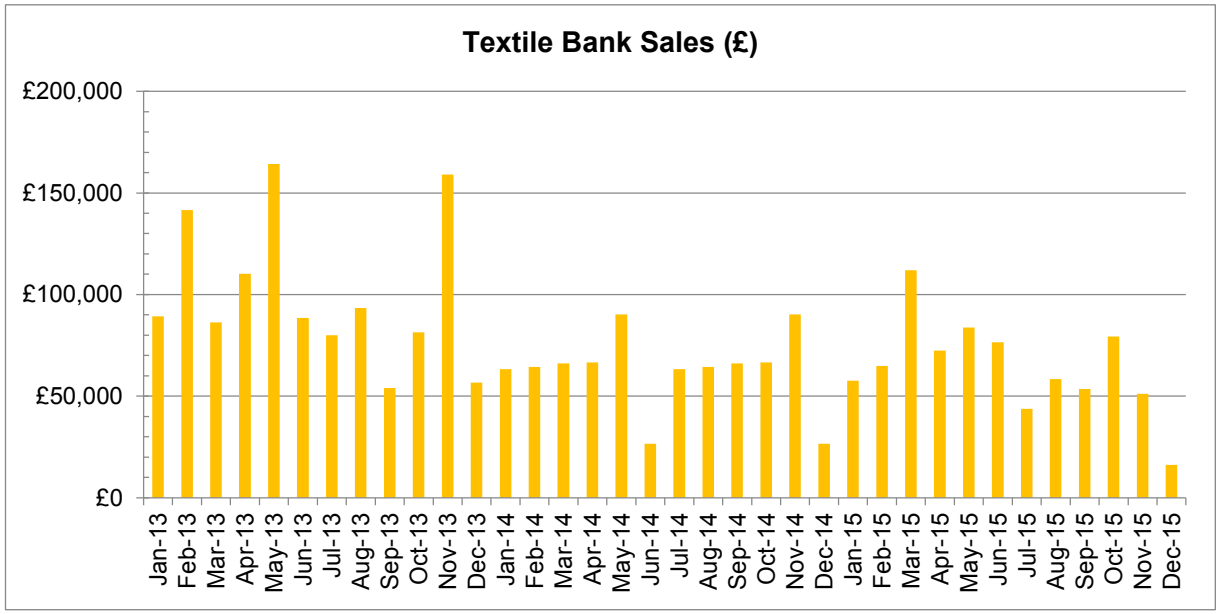
Single instances of supply categorised at **Premier** in March 2015 for 100kg at a cost of £350 and **New Clothes** in December 2013 for 340kg at a cost of £850 were also recorded.

Sales and Goods Out

IGC produce around twenty two different categories or grades of product for sale and export. The three most profitable and high volume of these grades have been textile bank, door to door and African grade, although door to door sales have now ceased due to problems in the collection market. Each of the twenty two grades represents on average 15,000kg of goods per month with an average sale price of £12,000. Highest monthly sales over the three year study were for around 610,000kg with a value of £520,000. Lowest sales were for around 180,000kg for £140,000. IGC sell an average of 335,000kg of goods per month for around £260,000, or £0.78 per kg. Average sales by weight are lower than the average goods coming in per month by around 25,000kg, indicating that there must often be stored inventory. The average monthly sales figure is higher than the average goods in cost per month, leaving revenue available for management wages, overheads and expenses, plus profit and investment back into the company.

Textile Bank Sales



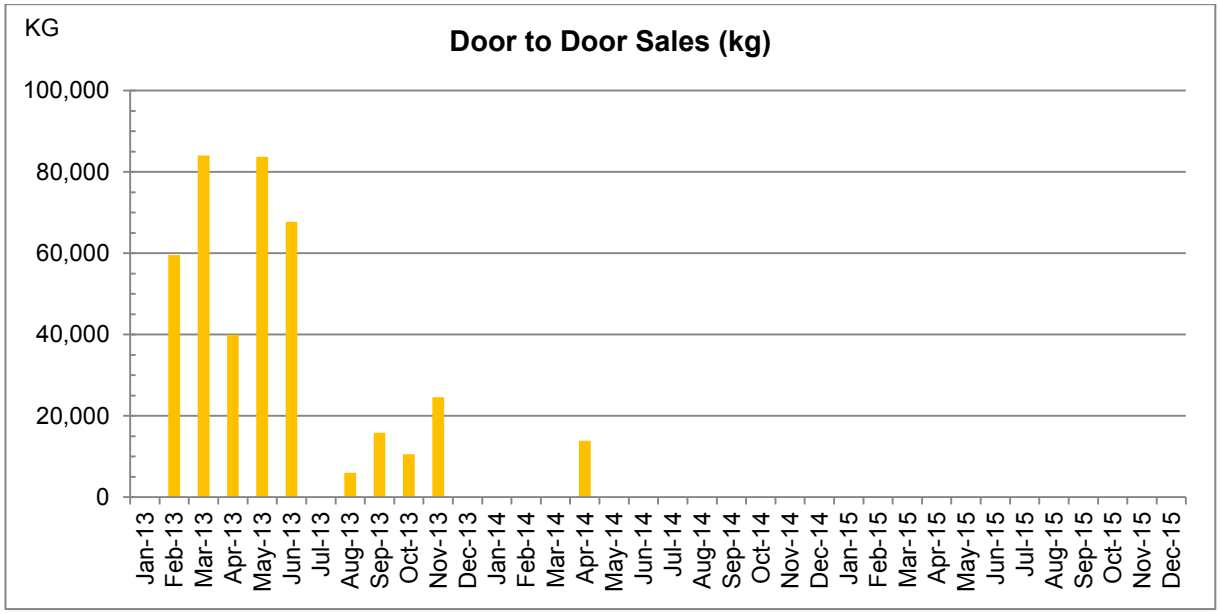


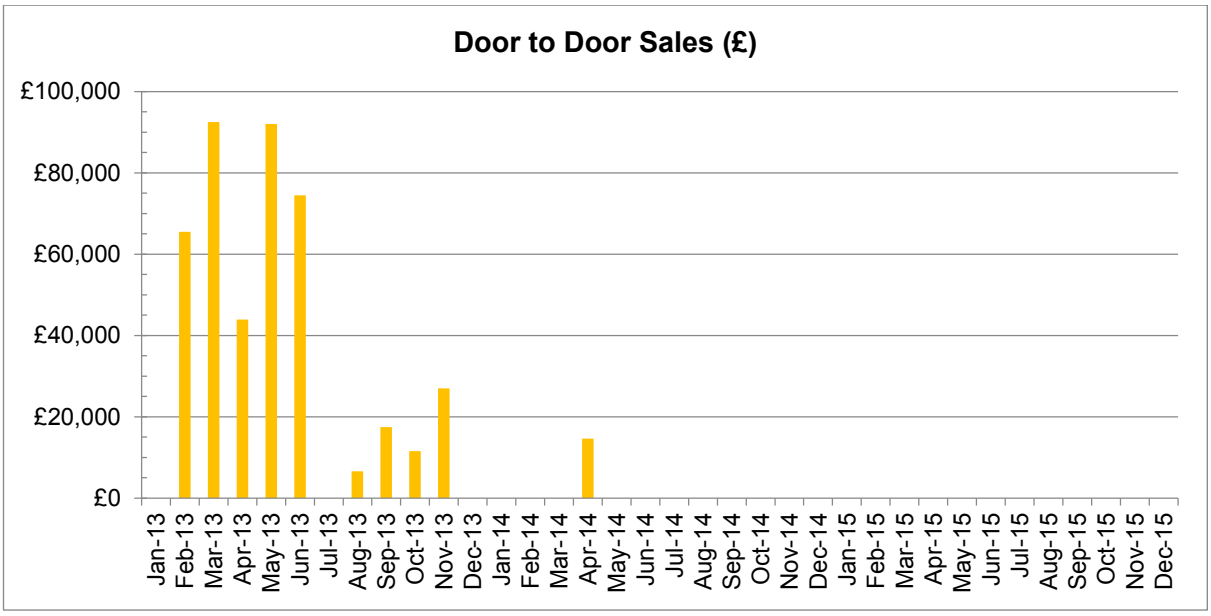
Textile Bank: These sales represent 170kg bulk bag lots of items collected in textile banks, largely unsorted, but with any rubbish, damp textiles or non-textile items removed. Often sold on to North Africa and Eastern Europe and some trade customers in the UK, these bulk quantities are sorted at their final destination. Despite the supply of textile bank collections remaining consistently high, as well as gradually increasing over time and reducing in cost, sales of textile bank product has shown a gradual decrease over time. This may be because not all the textile bank collections coming in are being sold as textile bank product, but get sorted into further grades for different product types. Peak sales loosely appear to occur around spring and autumn each year. Variance may be explained by seasonal weather patterns and changing school term dates. Taking the November sales peaks for comparison, the charts show

that in November 2013 206,560kg were sold for £159,051. In November 2014 this was down to 128,920kg, sold for £90,244 and in November 2015 a further fall in sales to 102,360kg, sold for £51,180. A peak in October 2015 of 158,620kg sold for £79,310, despite being a larger quantity than was sold in November 2014, this amount sold for over £10,000 less. This is confirmed by the falling sale price per kg provided by IGC, showing prices to have fallen by 37.5% over the three year study.

Textile Bank – Sale price per kg	
January to June 2013	£0.80
July to December 2013	£0.77
January to June 2014	£0.73
July to December 2014	£0.70
January to June 2015	£0.63
July to December 2015	£0.50

Door to Door Sales

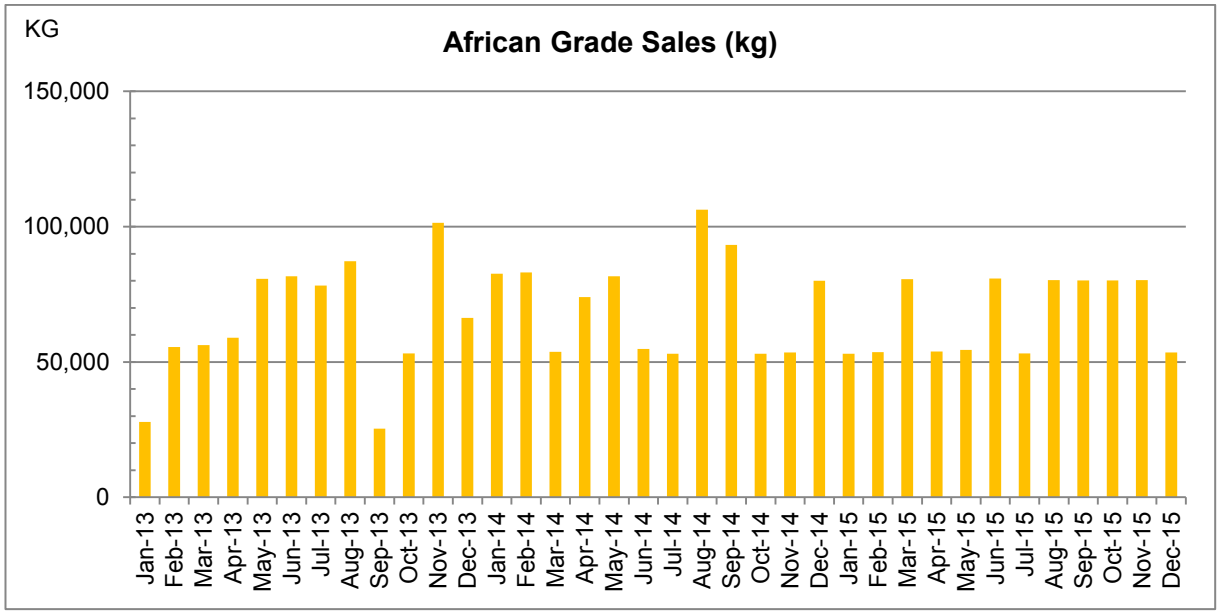


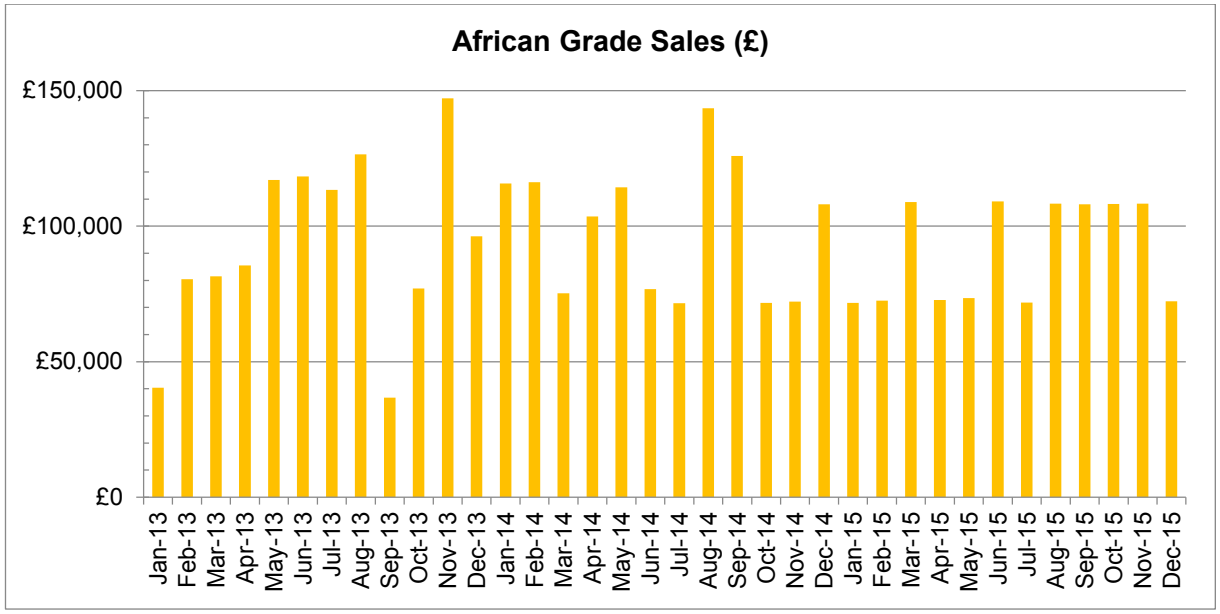


Door to Door: This product category represents bulk bag lots of unsorted items from door to door collections. Despite initially representing a significant volume of sales in 2013, with a peak of 84,080kg sold for £92,488 in March 2013, door to door sales had all but ceased by November 2013, apart from one final isolated sale in April 2014. This is directly connected to IGC's decision to cease collecting door to door textiles, although a low level of these collections were still coming into IGC's facility through to the end of 2015. The lack of door to door sales in 2014 and 2015 would suggest that the level of collections coming in from this source were not enough to create bulk bag lots in sufficient quantity for sale. This product category was also affected by sale prices falling by 23% over the three years, presenting an additional reason not to source and create this product category for sale.

Door to Door – Sale price per kg	
January to June 2013	£1.10
July to December 2013	£1.10
January to June 2014	£1.05
July to December 2014	£1.05
January to June 2015	£0.95
July to December 2015	£0.85

African Grade Sales

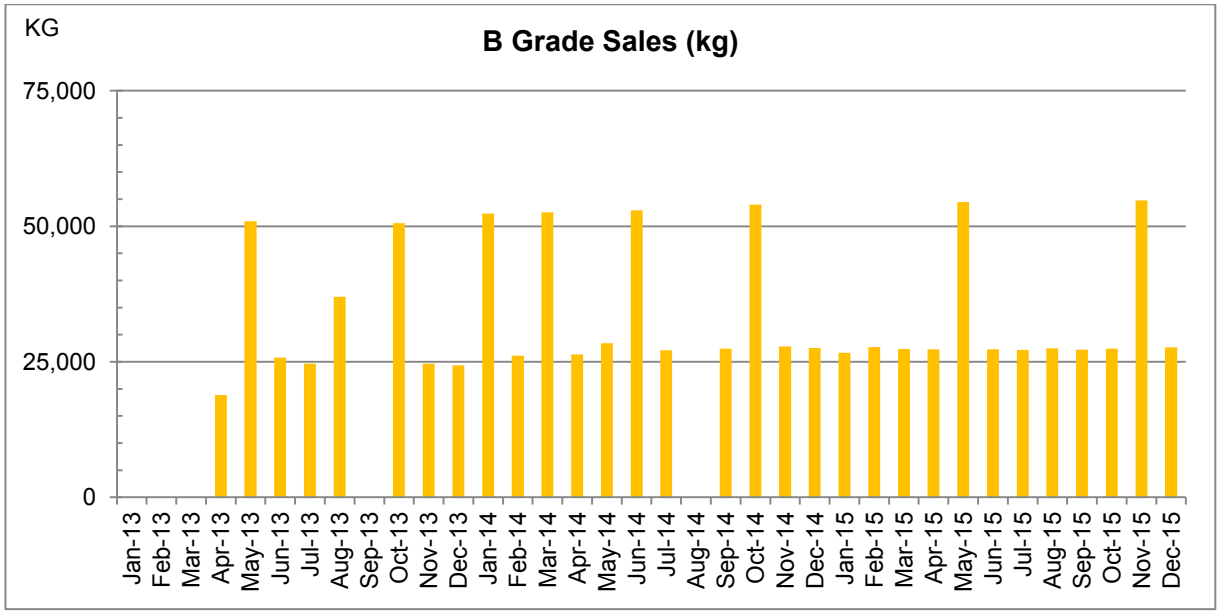


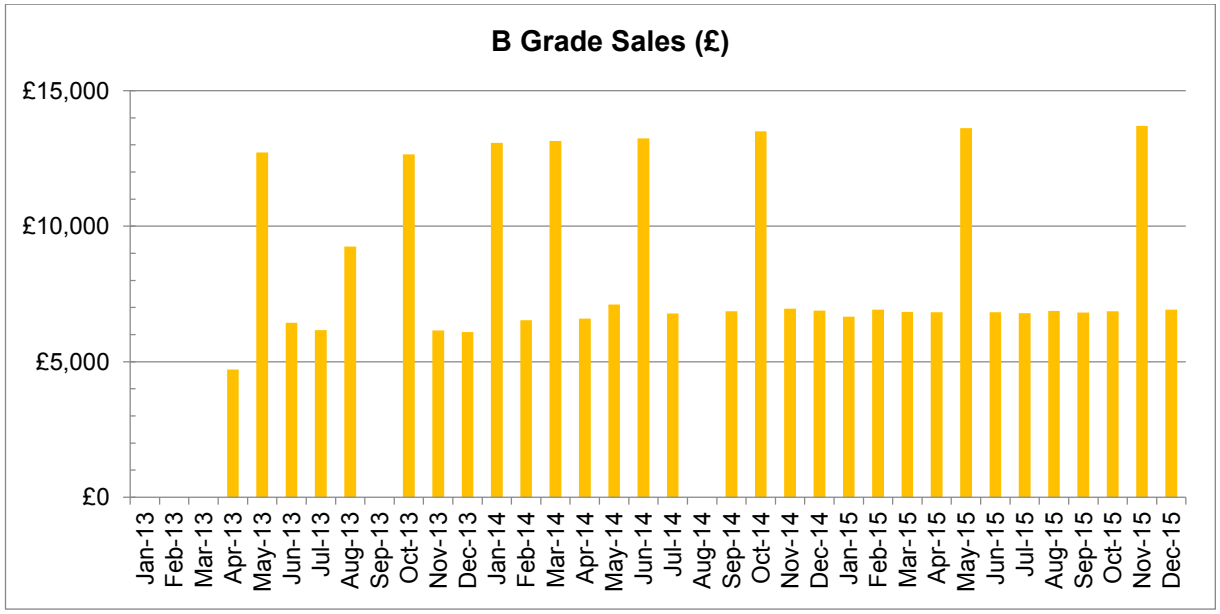


African Grade: This category represents the first grade of lightweight and summer clothing sent to Africa. The charts show this to be a relatively stable and consistent sale category. Monthly sales average around 67,000kg per month, selling for about £94,000 per month. Prices have fallen over the three year period, but only by 6.9%, presenting a fairly stable market. As prices are higher and more stable in this market, it may be possible that more lightweight and summer clothing has been sorted out of incoming collections in order to provide a greater volume for sale to the African market.

African Grade – Sale price per kg	
January to June 2013	£1.45
July to December 2013	£1.45
January to June 2014	£1.40
July to December 2014	£1.35
January to June 2015	£1.35
July to December 2015	£1.35

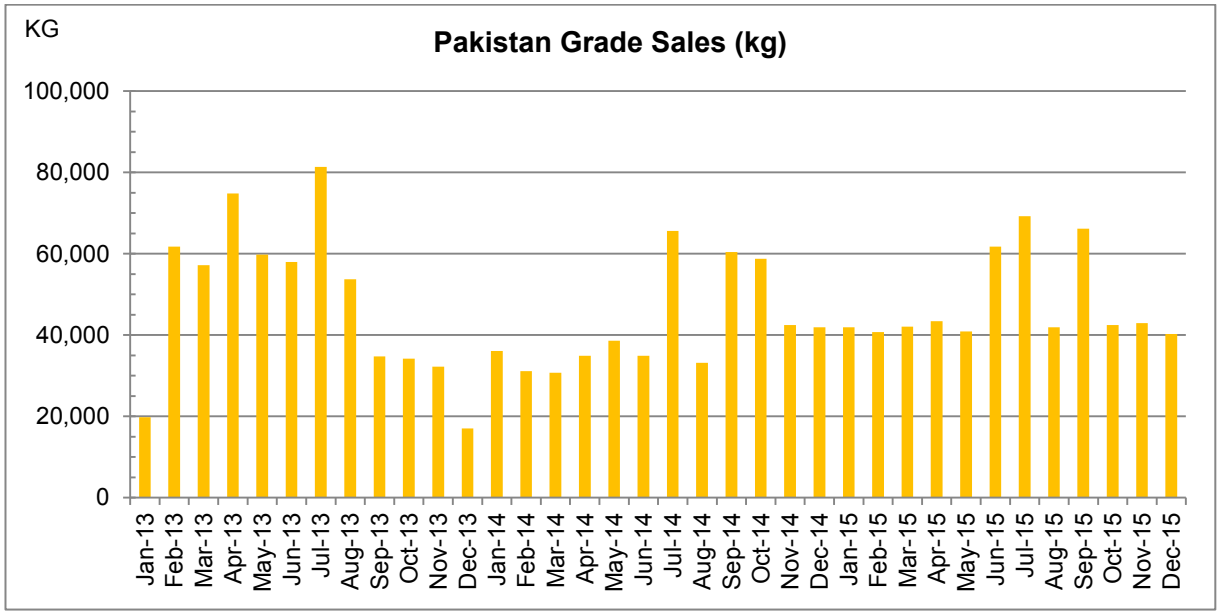
B Grade Sales

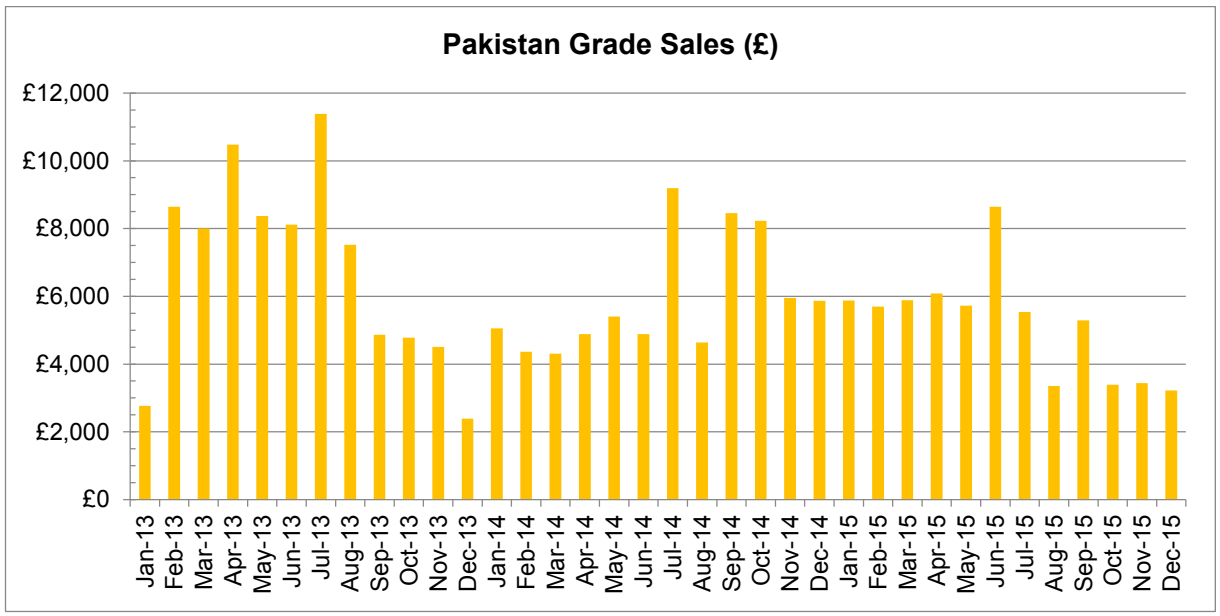




B Grade: This category represents the second grade of poorer quality lightweight and summer clothing sent to Africa. Sales of this category appear to be fairly stable at the level of around 25,000kg / £7,000 per month, with two to four peaks per year of around 50,000kg / £13,000. Volumes and sale prices are low but consistent, reflected in the price per kg, which has remained at £0.25 for the whole three years studied.

Pakistan Grade Sales





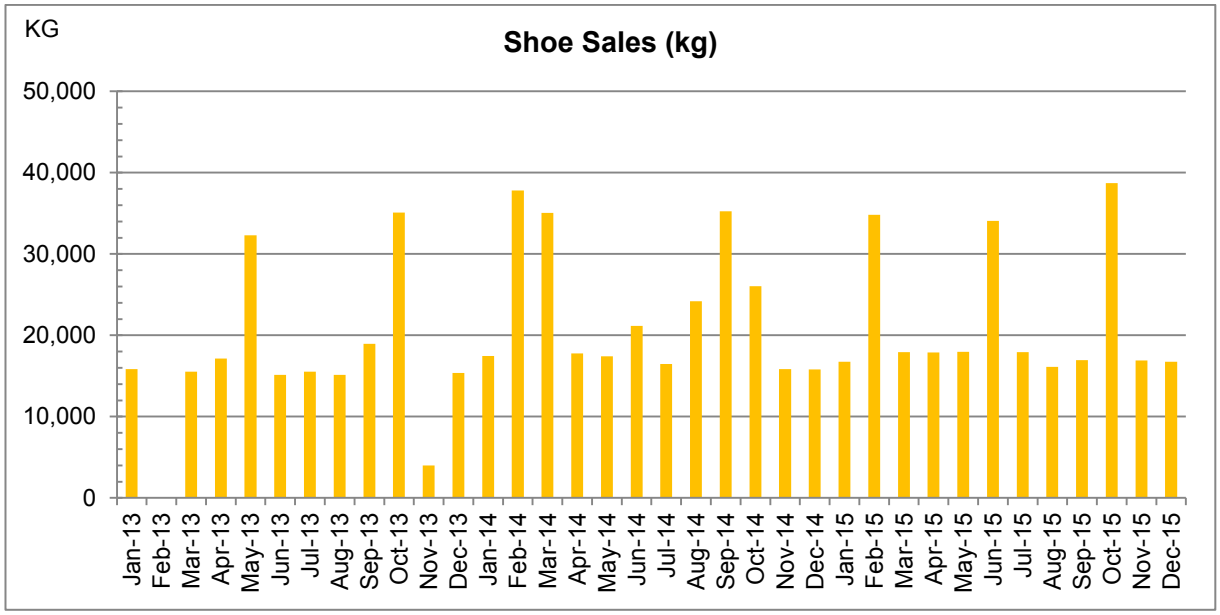
Pakistan Grade: This category is made up of low quality heavy items and winter clothing, exported to Pakistan. Duvets are also sold on at a very low price to India or Pakistan to be shredded. The charts show that although this sale category is relatively stable and consistent, it is of low value and in gradual decline overall, perhaps because of the low value received for the high volume of goods which make up this

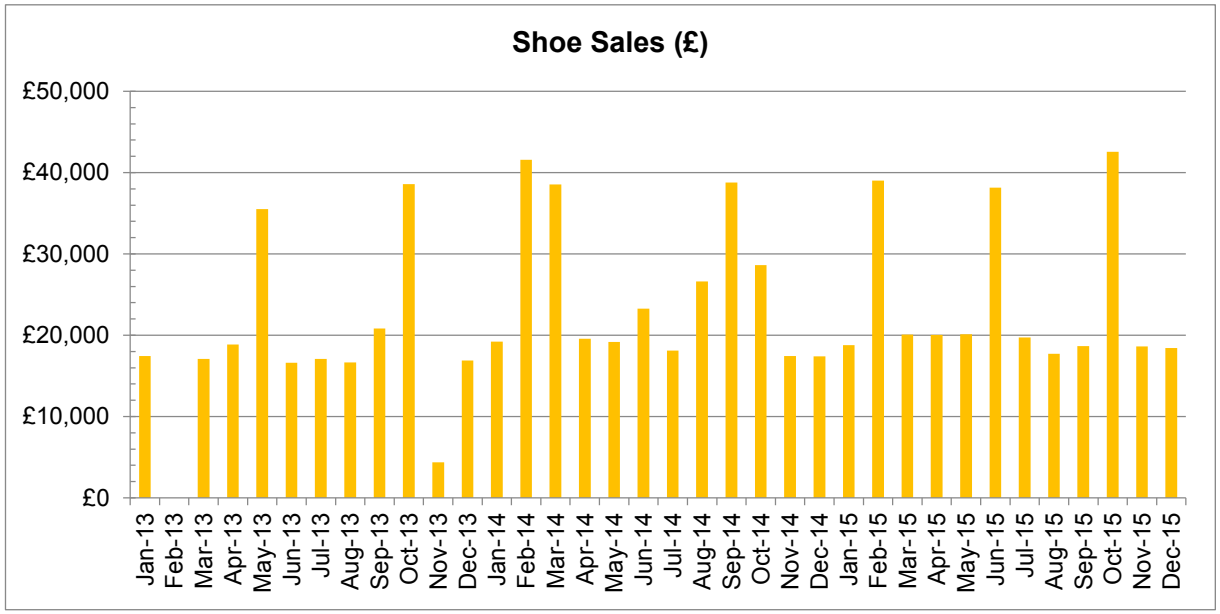
category. The high volumes suggest that creating this product category would require as much sorting and grading as other higher value categories, with associated wage costs and overheads. It is likely that a preferable use of resources for the company would be in creating the higher value product grades, such as textile bank and African grade. Sales were highest in 2013 and peak around June or July of each year. The highest sales recorded in this category were for 81,340kg for £11,388 in July 2013. By July 2015, sales of this grade were 69,220kg at a value of £5,538, reflected in the falling price per kg, down to just £0.08 by 2015, a fall of 43% for an already low value product.

Pakistan Grade – Sale price per kg	
January to June 2013	£0.14
July to December 2013	£0.14
January to June 2014	£0.14
July to December 2014	£0.14
January to June 2015	£0.14
July to December 2015	£0.08

The low prices reflected in this category suggest that although a less attractive market is presented, a consistent route for inevitable low value textiles is open to collectors, as an alternative to landfill. This does also present the danger that high volumes of low value items may rapidly enter into landfill or waste streams at their final destination.

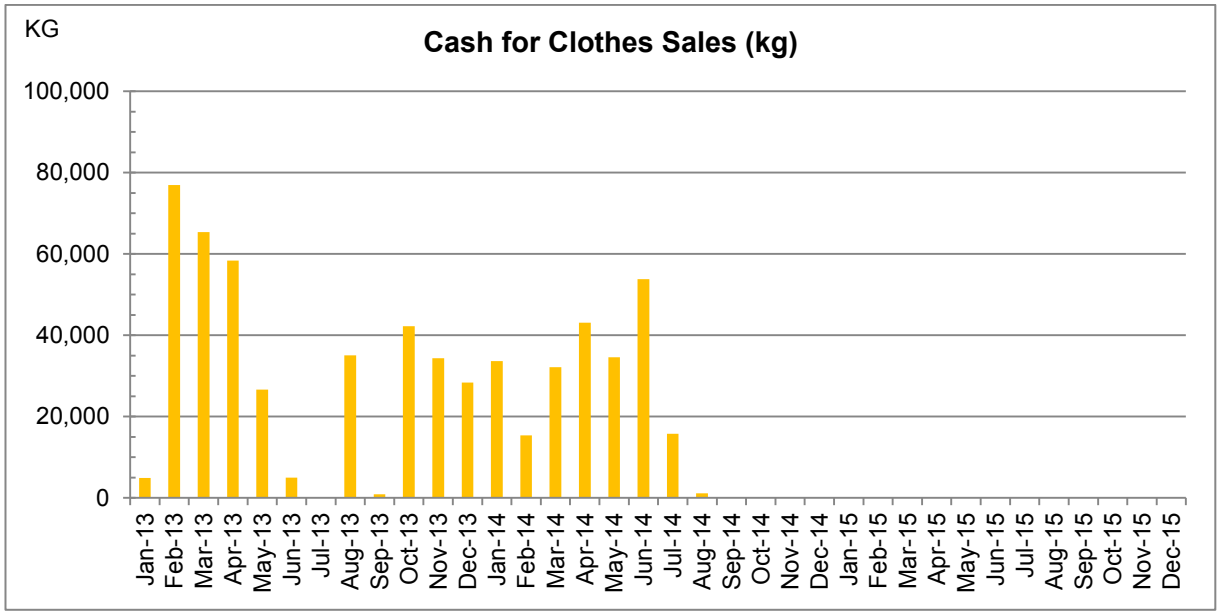
Shoe Sales

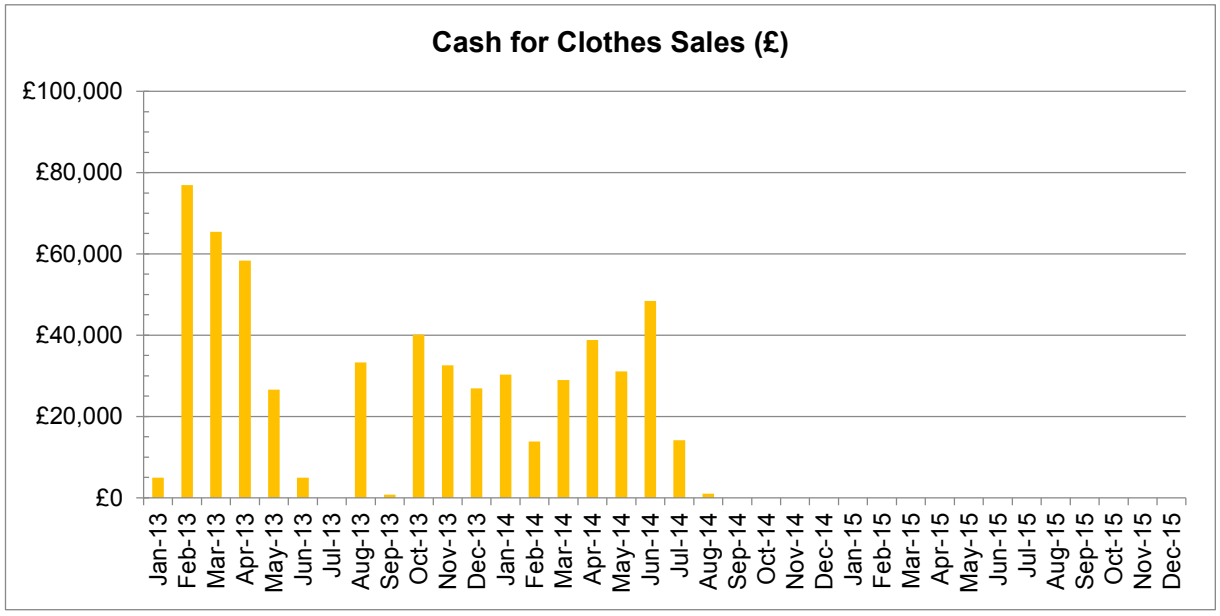




Shoes: Shoes are sorted into bulk bags of paired and unpaired shoes for sale. The charts show aggregated sales of both paired and unpaired shoes. Sales appear to be consistent at the level of around 16,000kg / £18,000 per month, with two to three peaks per year at the 35,000kg / £38,000 level. Sale volumes and prices have remained low but consistent, reflected in the price per kg, which has stayed at around £1.10 per kg for the whole three years studied.

Cash for Clothes Sales

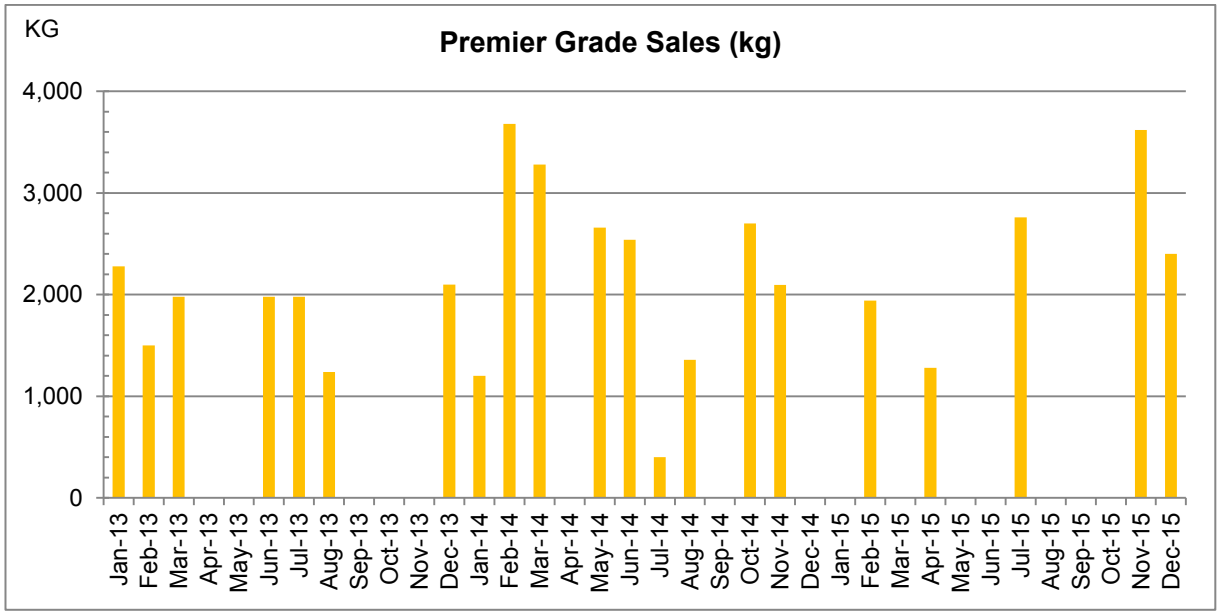


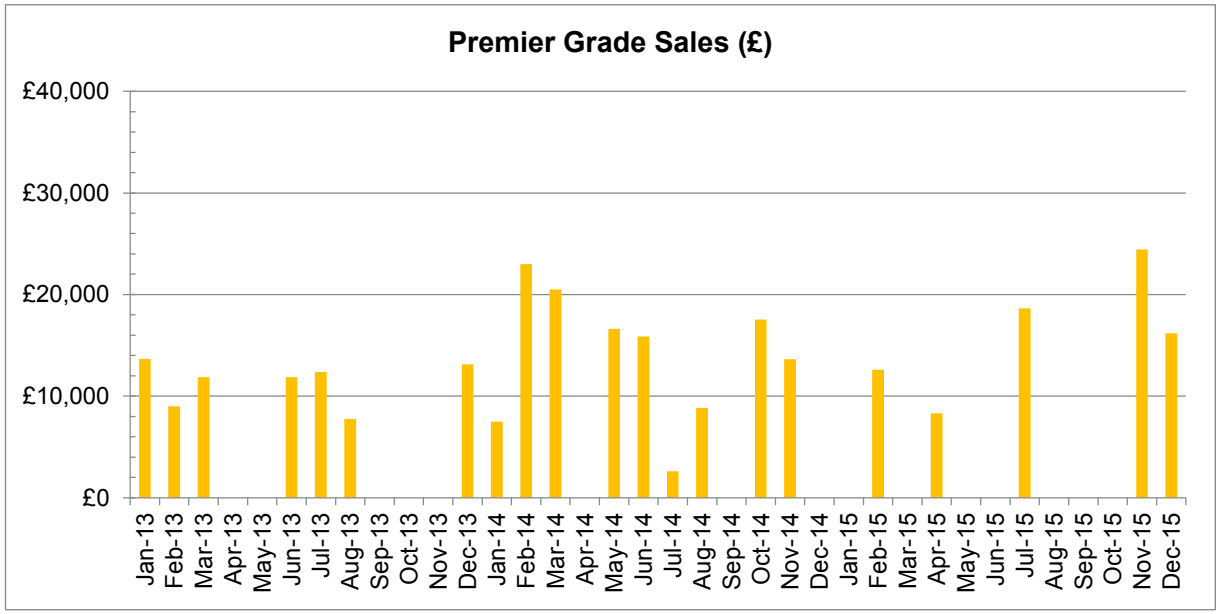


Cash for Clothes: This product category represents bulk bag lots of unsorted items from cash for clothes collections. As can be seen from the charts, this grade of product ceased to be sold by IGC in August 2014. This is directly connected to issues in the sourcing of this product, in which the exchange price received by individual members of the public became too low for it to be a worthwhile source of income. The sale price of this product also fell by 30% over the three year study, further reducing the incentive to create and sell a product grade in diminished supply.

Cash for Clothes – Sale price per kg	
January to June 2013	£1.00
July to December 2013	£0.95
January to June 2014	£0.90
July to December 2014	£0.90
January to June 2015	£0.80
July to December 2015	£0.70

Premier Grade Sales

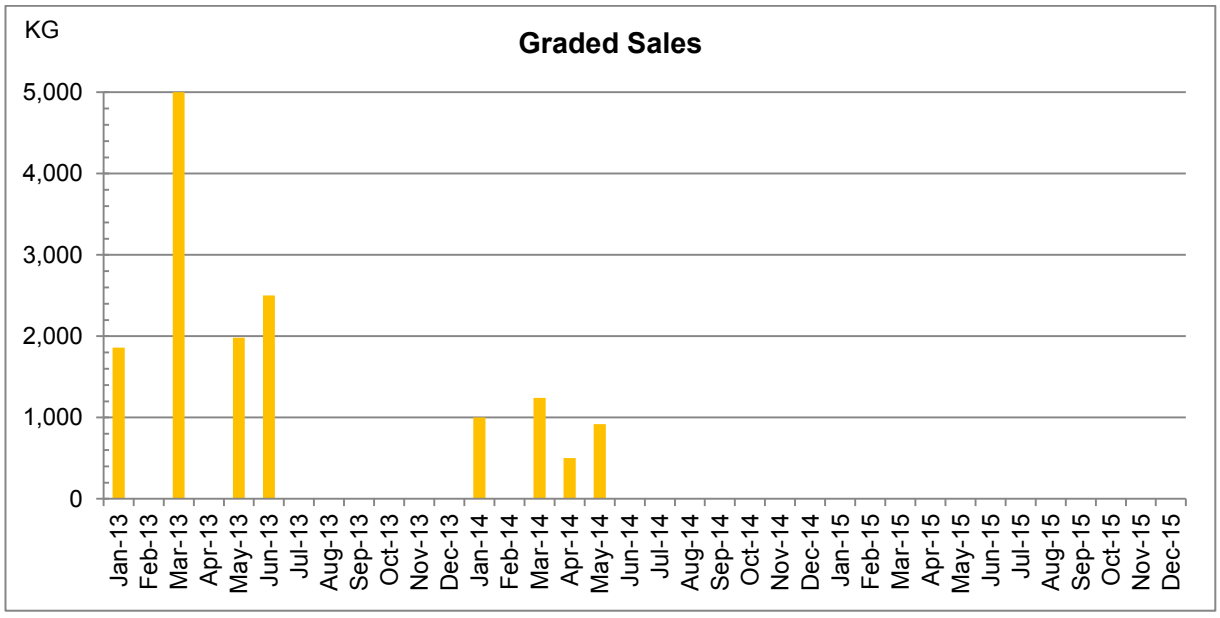


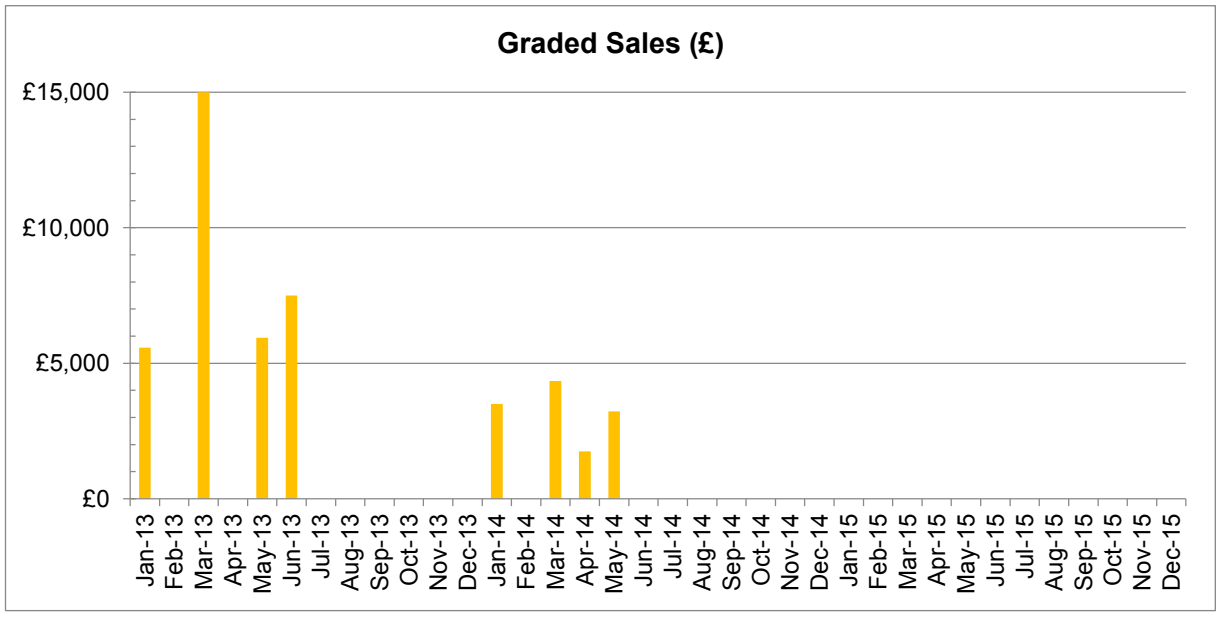


Premier Grade: Premier grade or crème represents the highest quality items, carefully sorted into smaller bags. UK traders and resellers also choose from this category when selecting items to purchase by weight. Sale prices have actually risen by 12.5% for this product category over the study period, although sales do remain infrequent but high in value, averaging around £6,400 for every 1,000kg sold.

Premier Grade – Sale price per kg	
January to June 2013	£6.00
July to December 2013	£6.25
January to June 2014	£6.25
July to December 2014	£6.50
January to June 2015	£6.50
July to December 2015	£6.75

Graded Sales

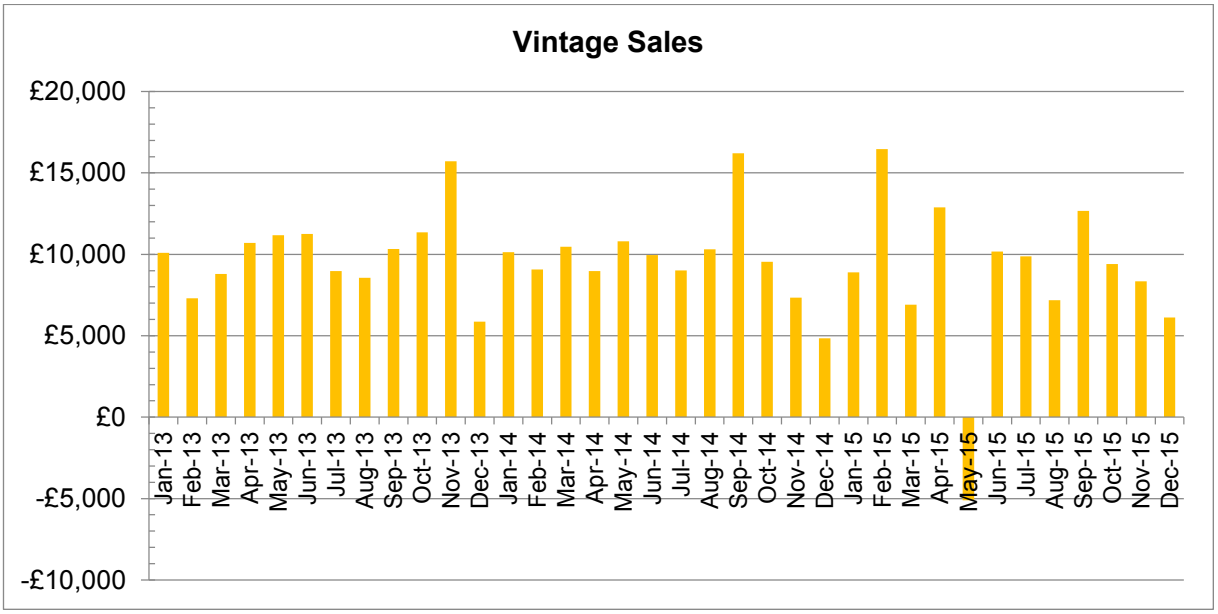




Graded: The graded category represents very good quality clothing that is not quite crème / premier standard. Sale prices have risen by 17% for this product category throughout the study. Sales are highly sporadic, but of reasonable value, averaging around £5,500 for every 1,800kg sold.

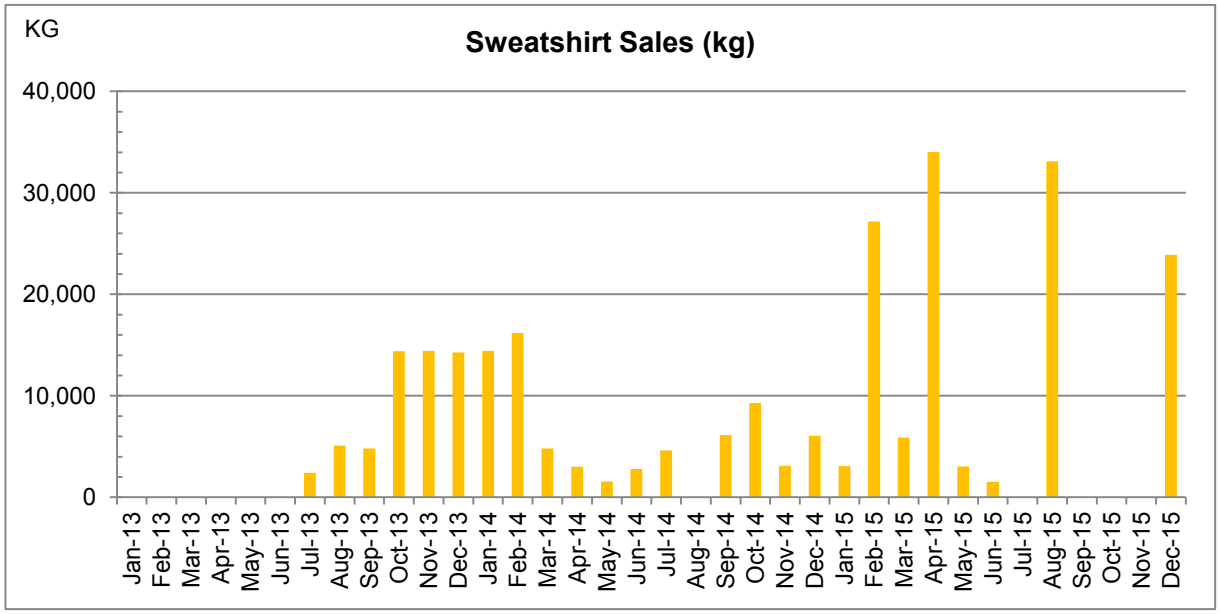
Graded – Sale price per kg	
January to June 2013	£3.00
July to December 2013	£3.00
January to June 2014	£3.50
July to December 2014	£3.50
January to June 2015	£3.50
July to December 2015	£3.50

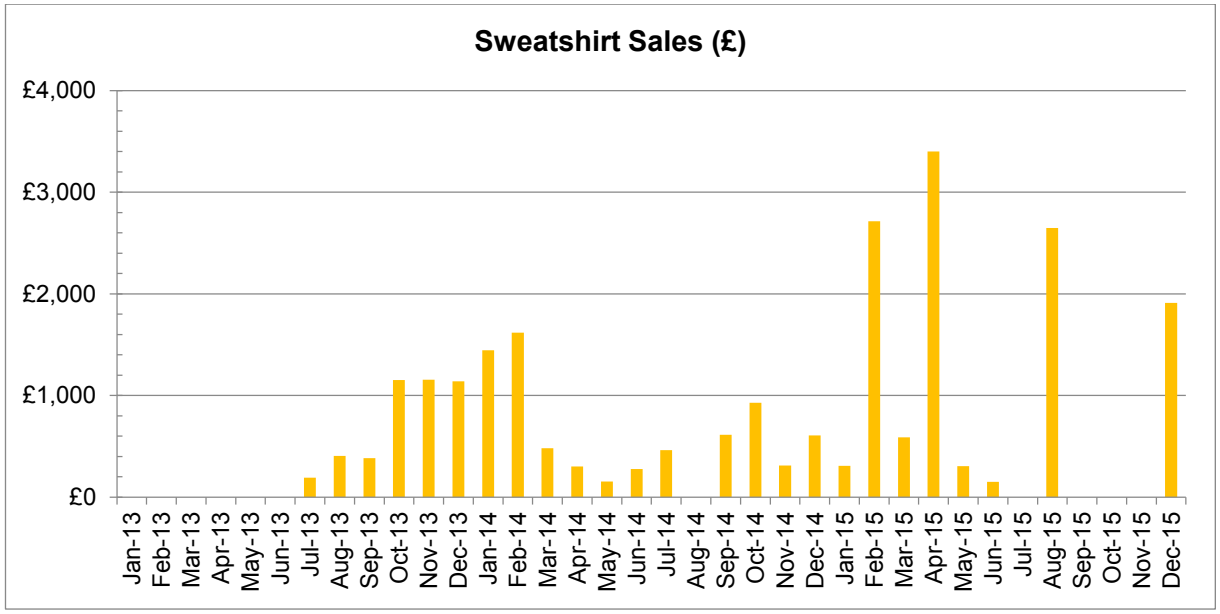
Vintage Sales



Vintage: Vintage items are carefully sorted out along with the 'Premier' and 'Graded' items, and sold from IGC's own wholesale vintage boutique at their warehouse location. Vintage products are sold as best quality items or by weight for poorer quality items. Number of items or volumes sold were not provided at the time of this study, however it is clear from the sales chart that vintage presents another low volume – high value premium product category to the company which it is desirable to sort for. One incidence of returns may be indicative of support offered to retail clients in an uncertain economic climate.

Sweatshirt Sales

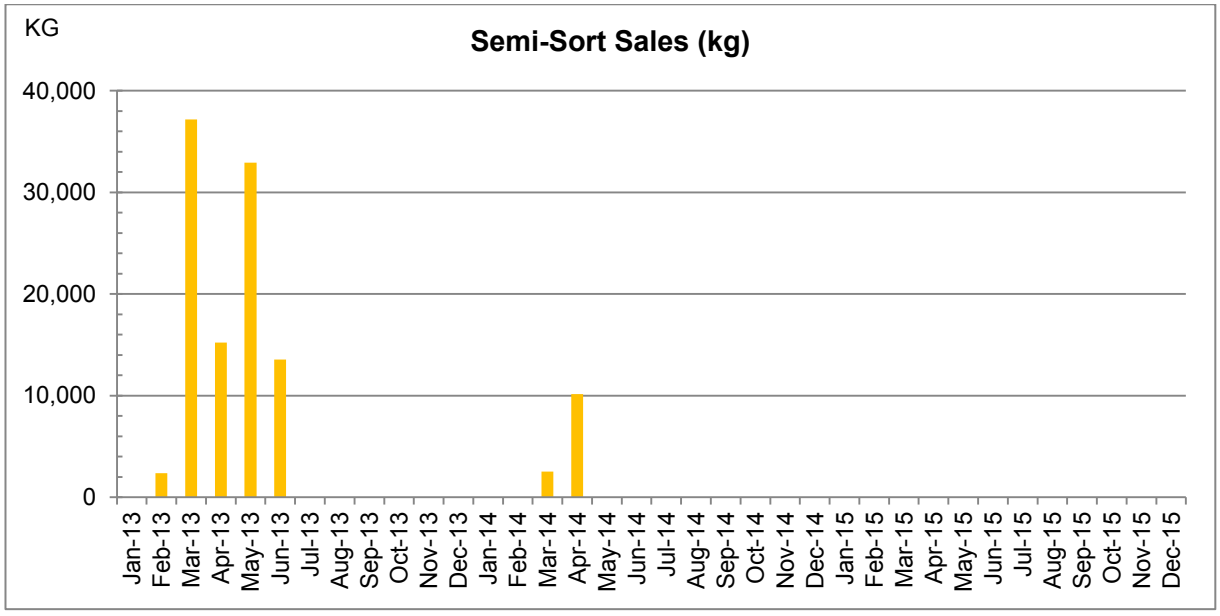


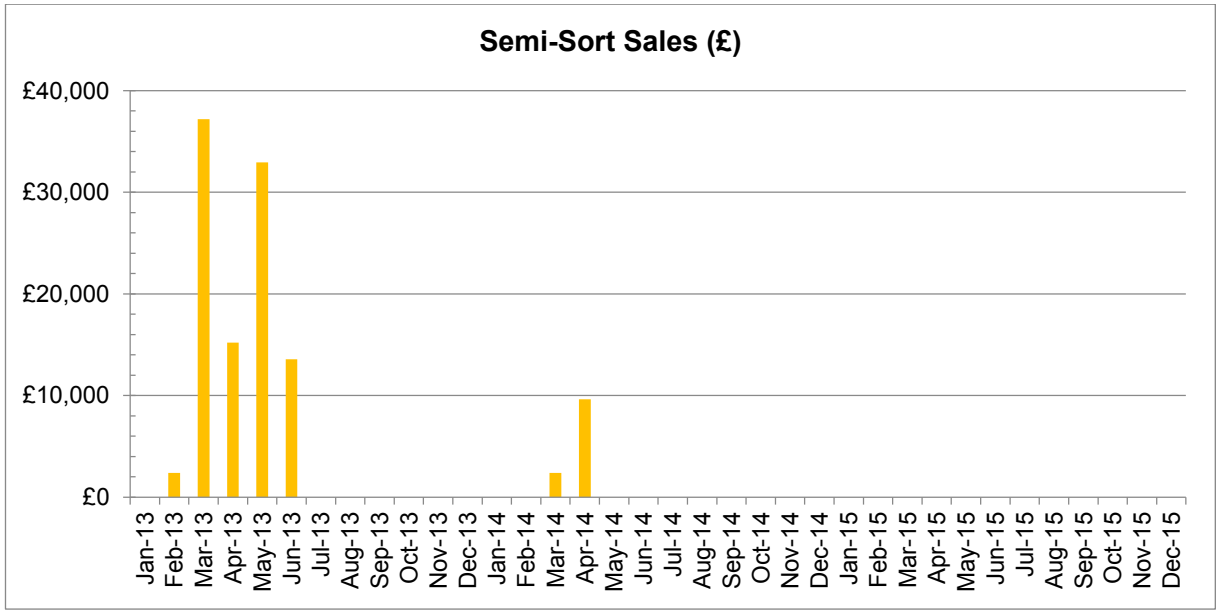


Sweatshirts: This recycling grade category is made up of low quality sweatshirts to be made into wipers. The charts show that although sporadic, sales of this product grade have increased over time, with sale price per kg remaining stable. This category represents only a fractional proportion of sales at IGC, however it may be indicative of the demand for increasingly more specialised grades which feed into further processing. Future sales volumes may be required to be split up into even further specialised grades of garment or fibre types in future, to create a fully circular economy.

Sweatshirts – Sale price per kg	
January to June 2013	£0.08
July to December 2013	£0.08
January to June 2014	£0.10
July to December 2014	£0.10
January to June 2015	£0.10
July to December 2015	£0.08

Semi-Sort Sales

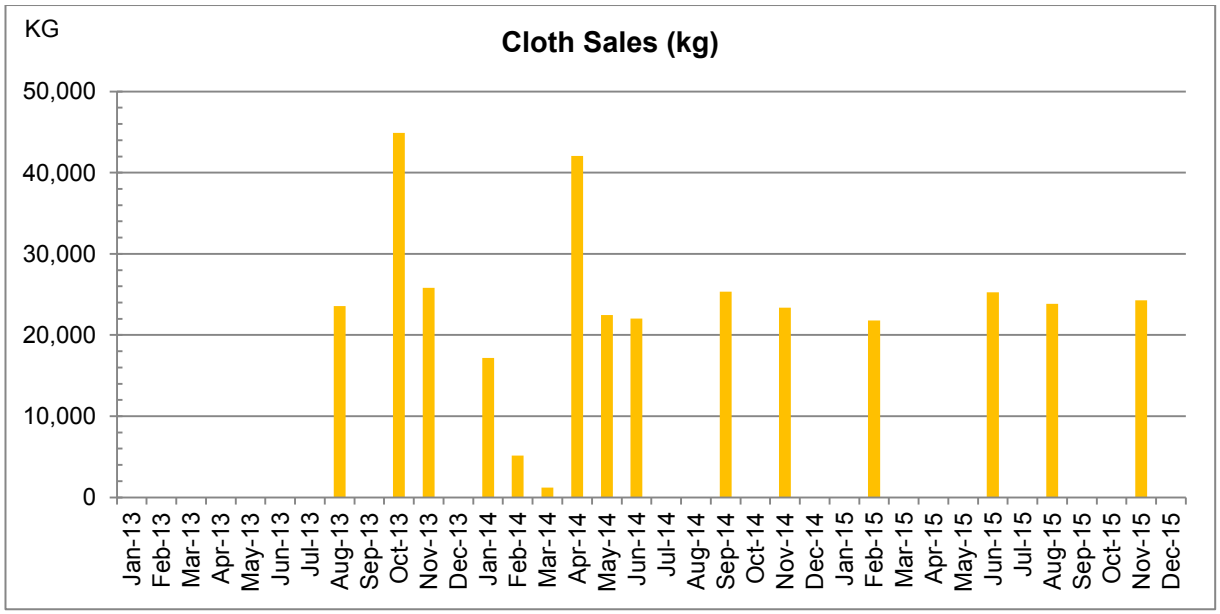


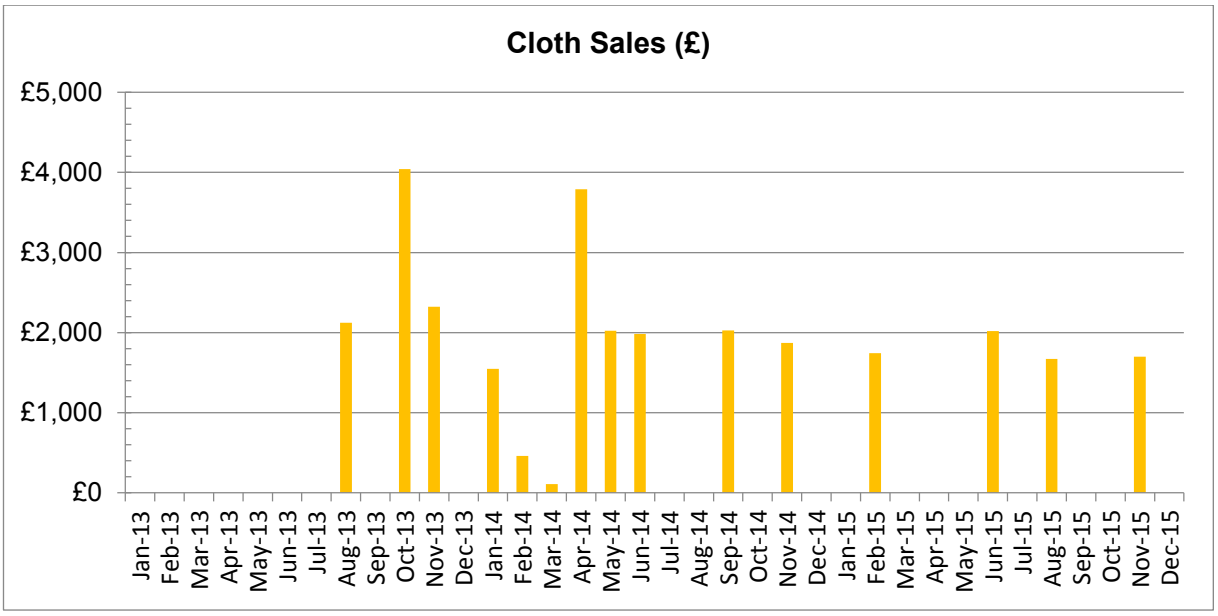


Semi-Sort: This category is made up of bulk bags of unsorted lightweight and summer clothing to be sold onto UK sorters and graders, reselling to African clients. As can be seen from the charts sales of this category are inconsistent and may have ceased entirely. Clients may have been purchasing the other grades of 'unsorted original products' such as textile bank and door to door collections, or more likely, the sorted bales of African or B grade lightweight and summer clothing. As confirmed in the interview with **PG**, the demand is for sorted bales which are immediately ready to go straight on to a market stall for the African grade buyers. Sales prices per kg have also fallen by 20% over the course of the study.

Semi-Sort – Sale price per kg	
January to June 2013	£1.00
July to December 2013	£0.97
January to June 2014	£0.95
July to December 2014	£0.90
January to June 2015	£0.85
July to December 2015	£0.80

Cloth Sales

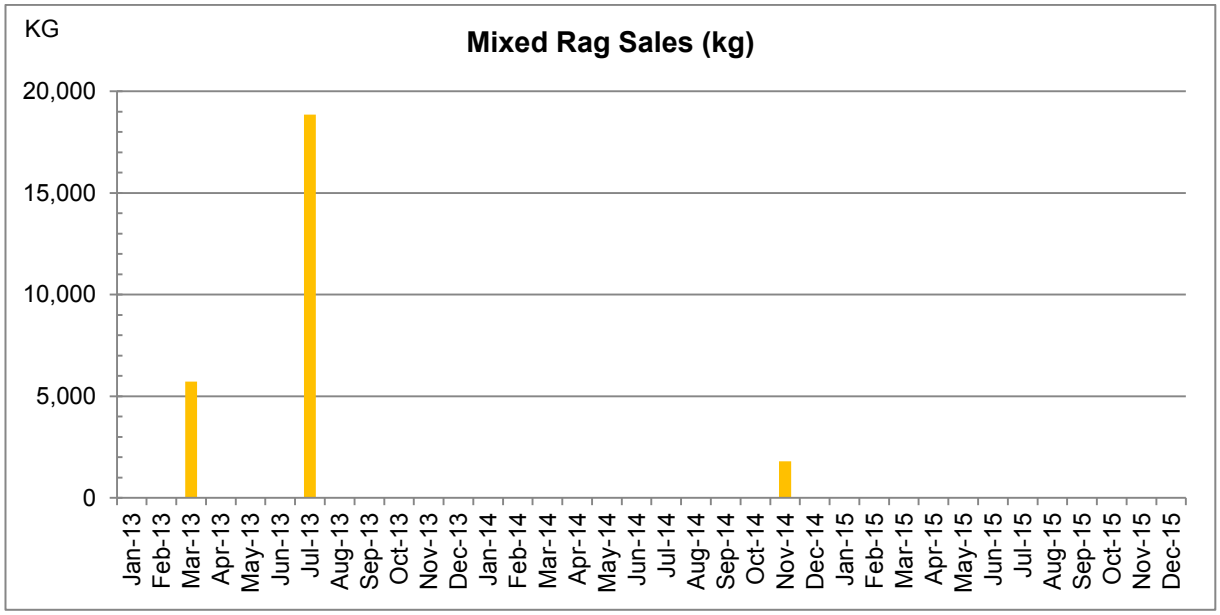


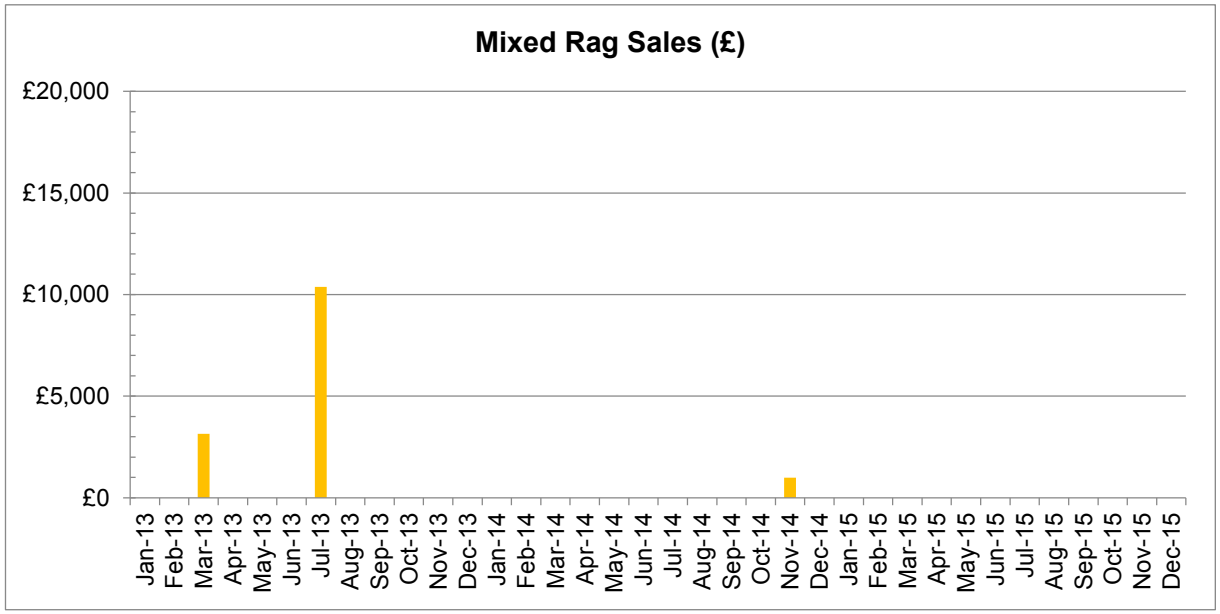


Cloth: This category is made up of low grade clothing and textiles which are unsuitable for reuse. This is a recycling grade with applications such as carpet underlay or car seat insulation manufacture. Sales of this product have been infrequent and of low value, suggesting that only a small proportion of goods coming in are unsuitable for reuse. Price per kg has also fallen by 30% over the three years.

Cloth – Sale price per kg	
January to June 2013	£0.10
July to December 2013	£0.09
January to June 2014	£0.09
July to December 2014	£0.08
January to June 2015	£0.08
July to December 2015	£0.07

Mixed Rag Sales

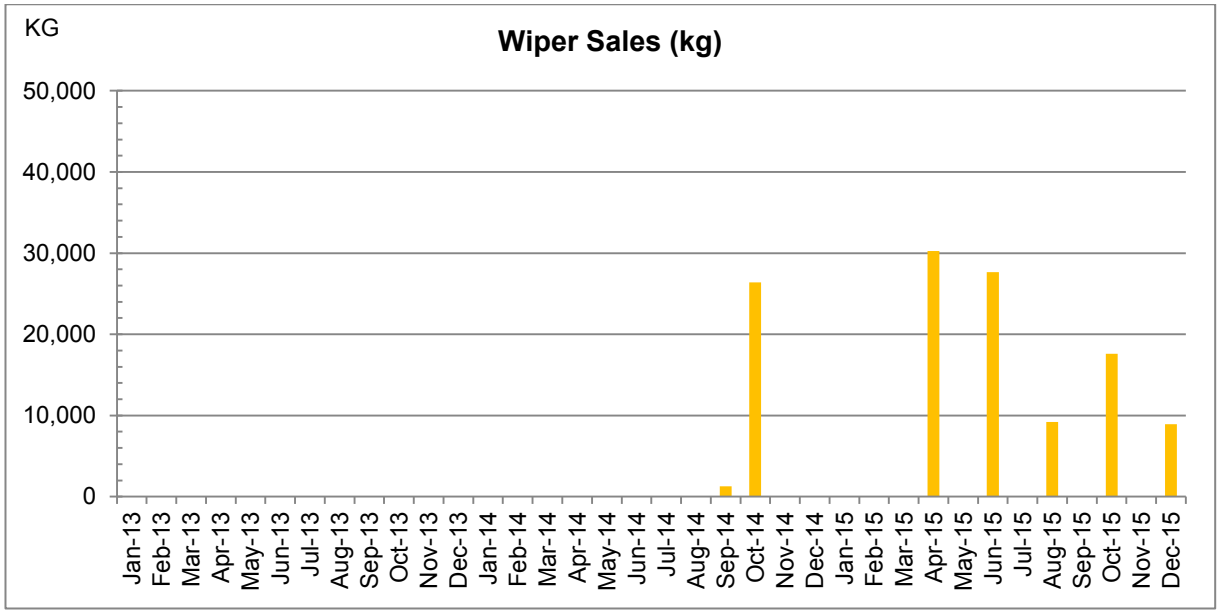


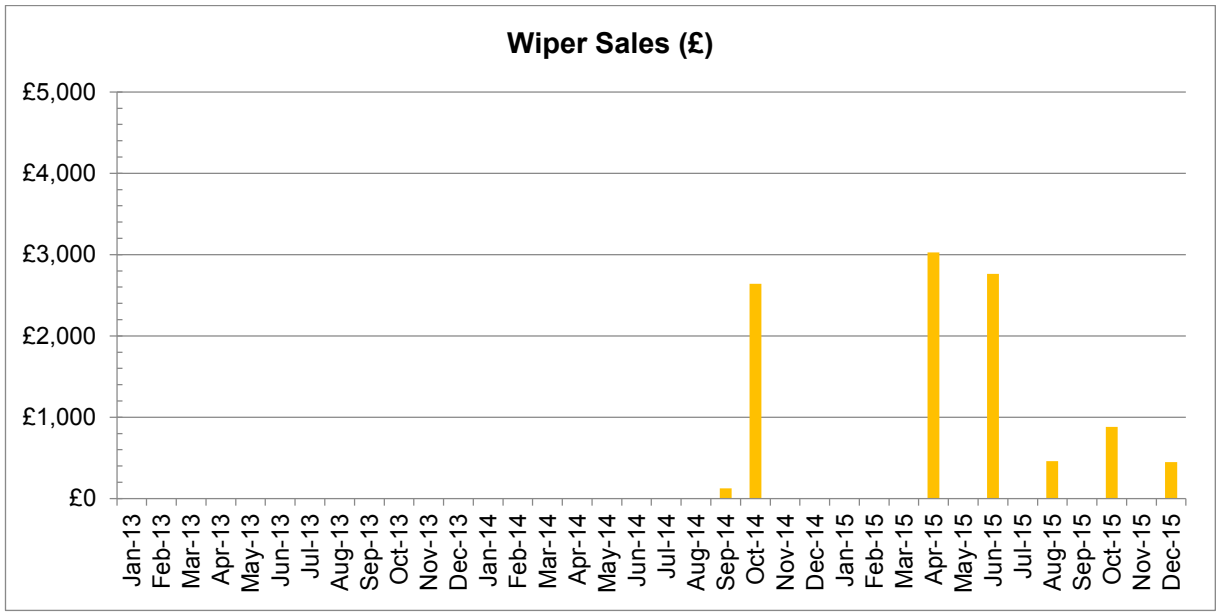


Mixed Rag: This grade of product represents bulk bag lots of unsorted clothes and textiles. Sales of this product are highly infrequent; however sale prices per kg have only fallen by 9% over the study period. Low sales may suggest that IGC's clients have a preference for other grades of 'unsorted original products' such as textile bank, door to door or charity shop, perhaps associating these grades with better quality.

Mixed Rag – Sale price per kg	
January to June 2013	£0.55
July to December 2013	£0.55
January to June 2014	£0.55
July to December 2014	£0.55
January to June 2015	£0.55
July to December 2015	£0.50

Wiper Grade Sales

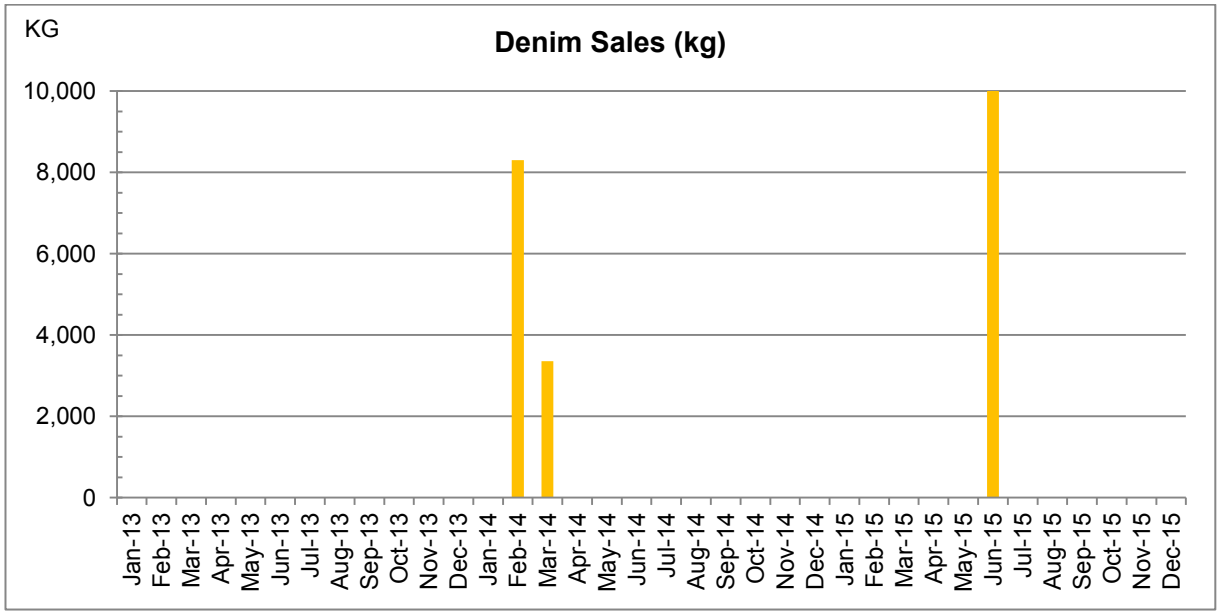


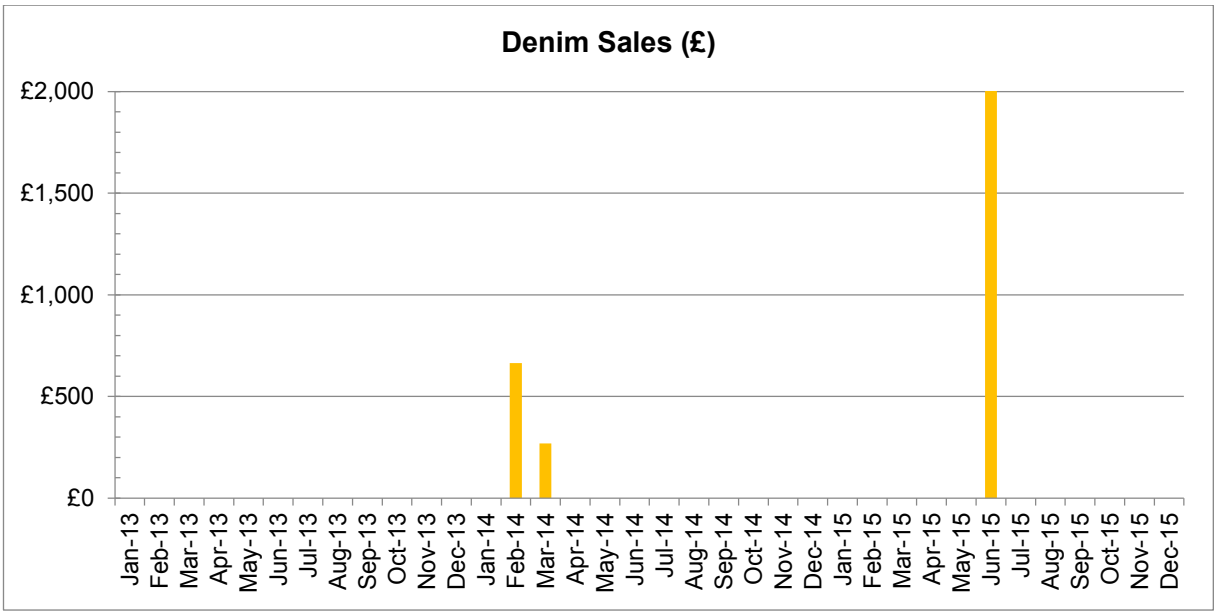


Wiper Grade: The wiper grade is made up of low quality cotton items which are unsuitable for reuse as clothing. This is a recycling grade in which items are usually cut into wiping cloths at their final destination. Sales of this grade are also low in value and sporadic, suggesting that the market for recycled wiper source materials is diminishing rapidly. Sale prices have fallen by 50% over the study, to an almost negligible level.

Wiper Grade – Sale price per kg	
January to June 2013	£0.10
July to December 2013	£0.10
January to June 2014	£0.10
July to December 2014	£0.10
January to June 2015	£0.10
July to December 2015	£0.05

Denim Sales

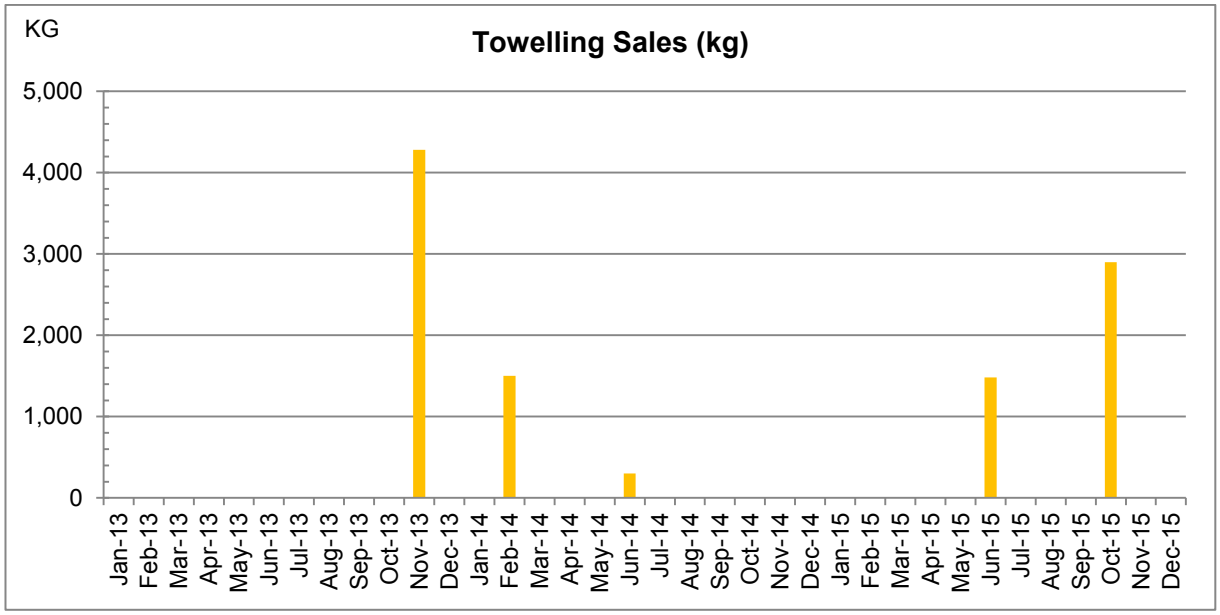


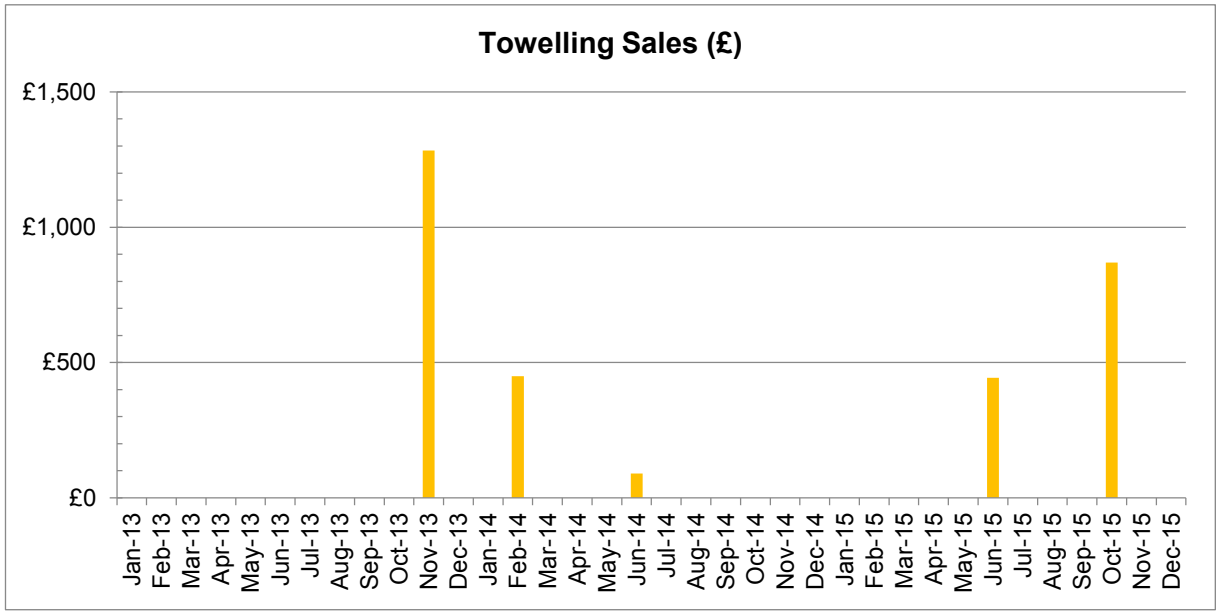


Denim: A recycling grade is made up of denim items unsuitable for reuse as clothing. Sales are minimal and very low in value and price per kg has fallen by 56% over the study.

Denim – Sale price per kg	
January to June 2013	£0.09
July to December 2013	£0.09
January to June 2014	£0.08
July to December 2014	£0.07
January to June 2015	£0.07
July to December 2015	£0.04

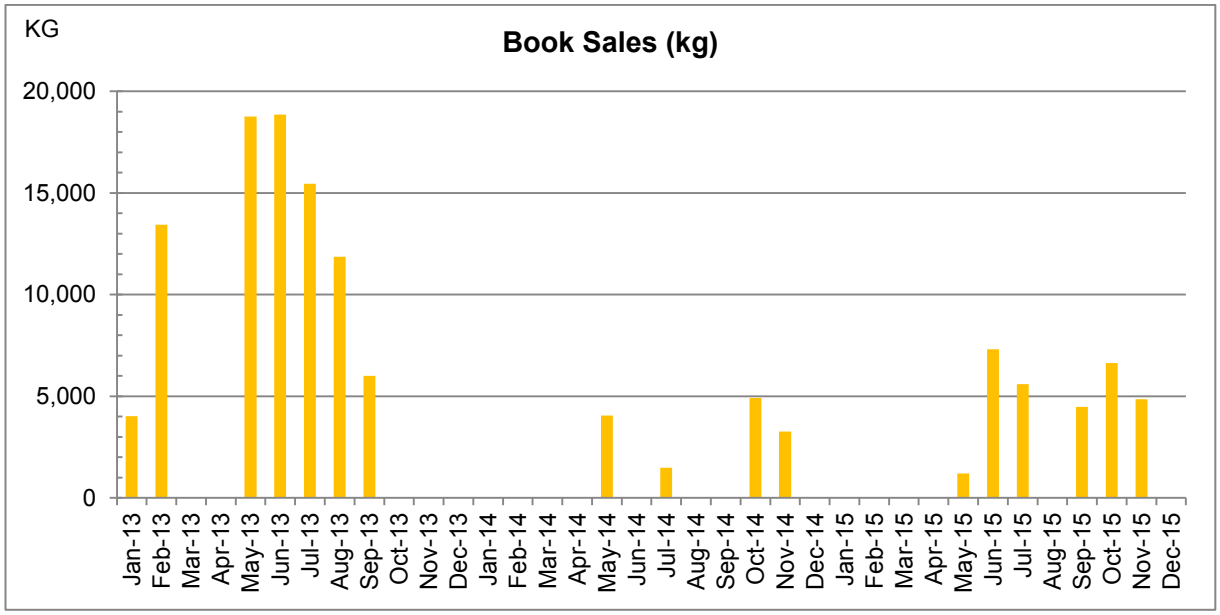
Towelling Sales

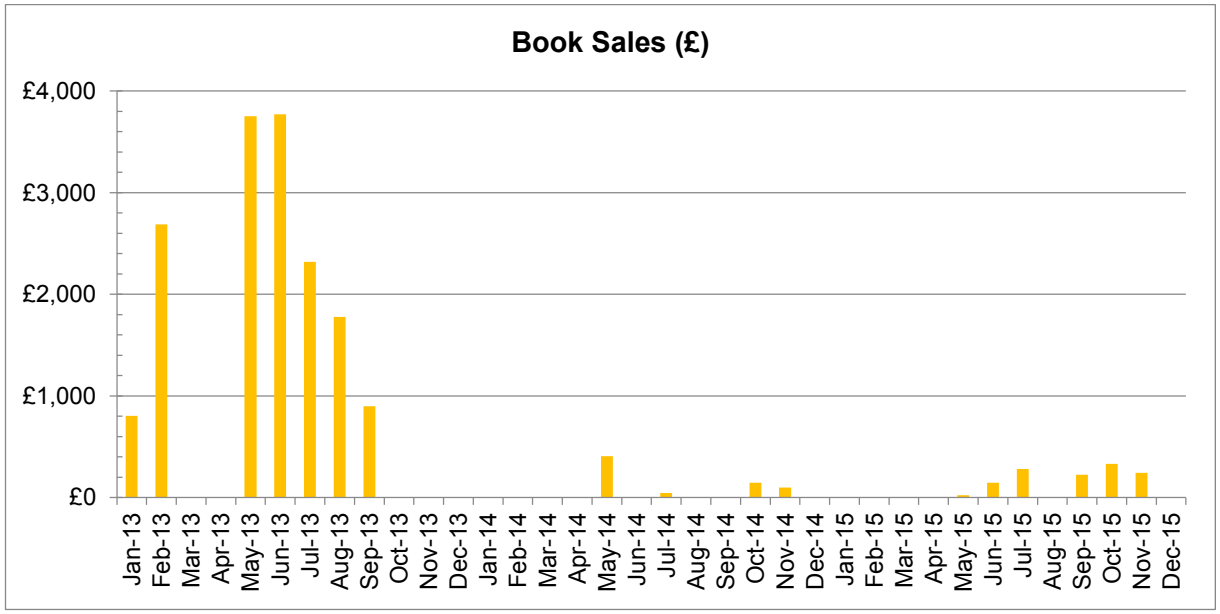




Towelling: Towelling or 'dressing gown' grade is another recycling grade made up of towelling fabric items for recycling. Sales are again highly sporadic, with an approximate value of around £0.30 per kg.

Book Sales

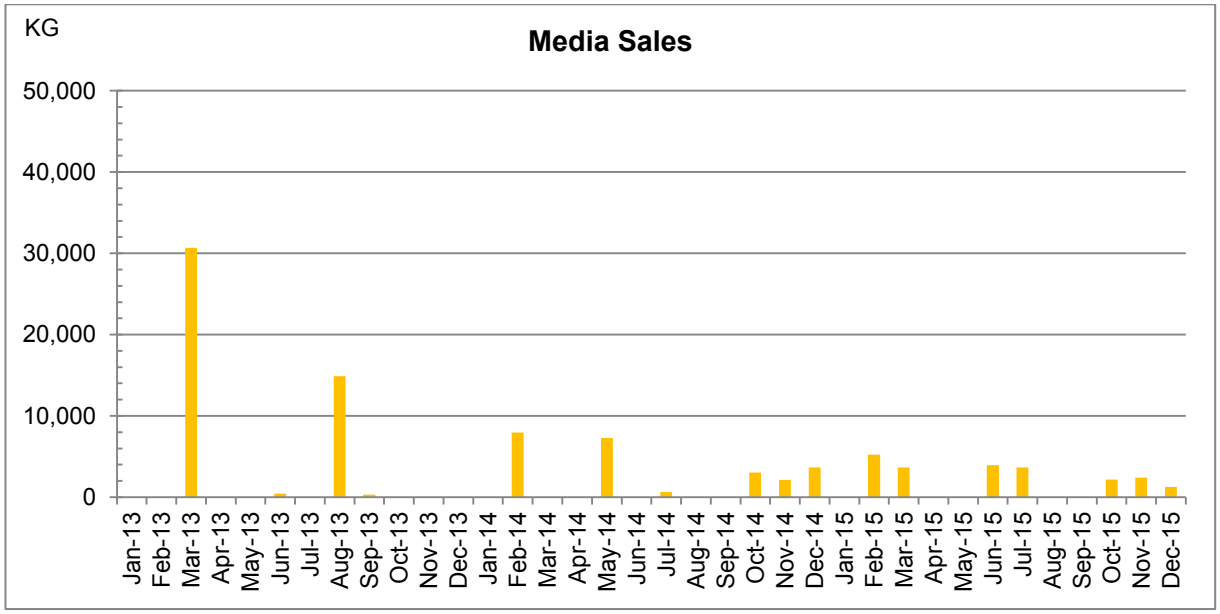


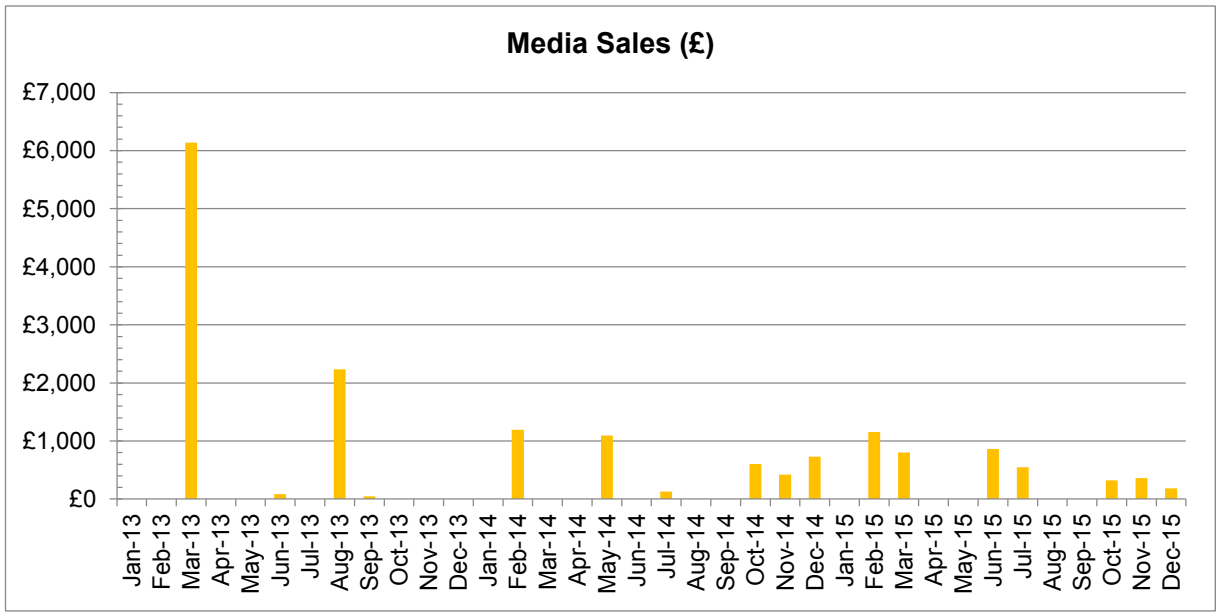


Books: Book sales have become increasingly less frequent and greatly reduced in volume over the study, falling from a peak of 18,860kg / £3,772 in June 2013 to 4,860kg / £243 by November 2015. Sale prices per kg fell by 75% over the three years, to almost the same level received for cardboard for recycling, barely making this product worth sorting for.

Books – Sale price per kg	
January to June 2013	£0.09
July to December 2013	£0.09
January to June 2014	£0.08
July to December 2014	£0.07
January to June 2015	£0.07
July to December 2015	£0.04

Media Sales

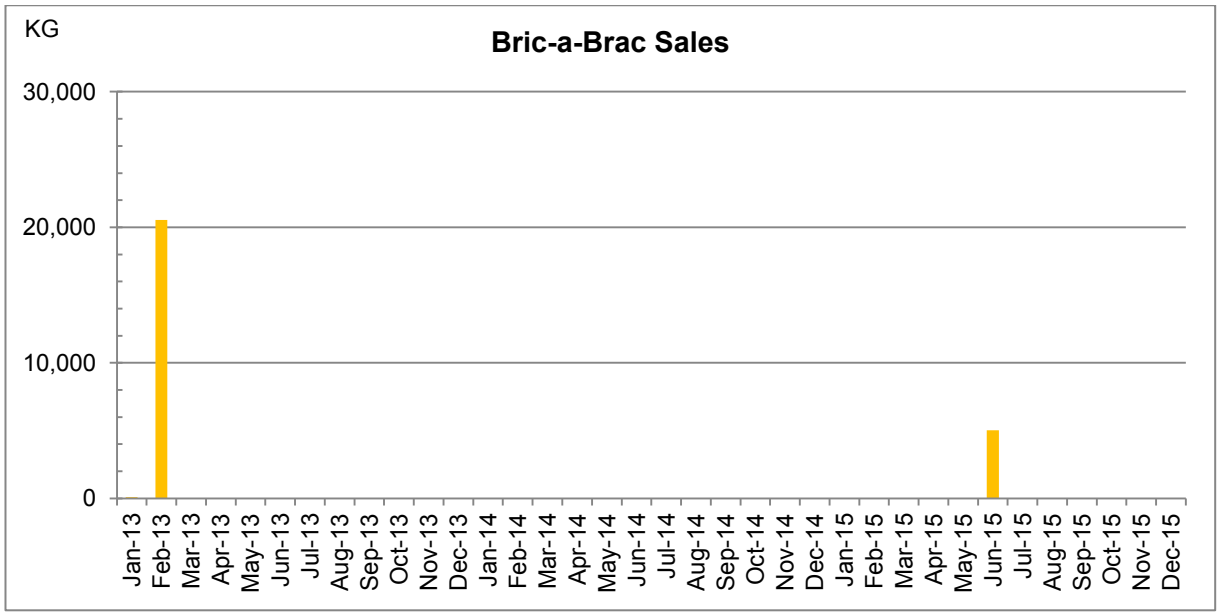


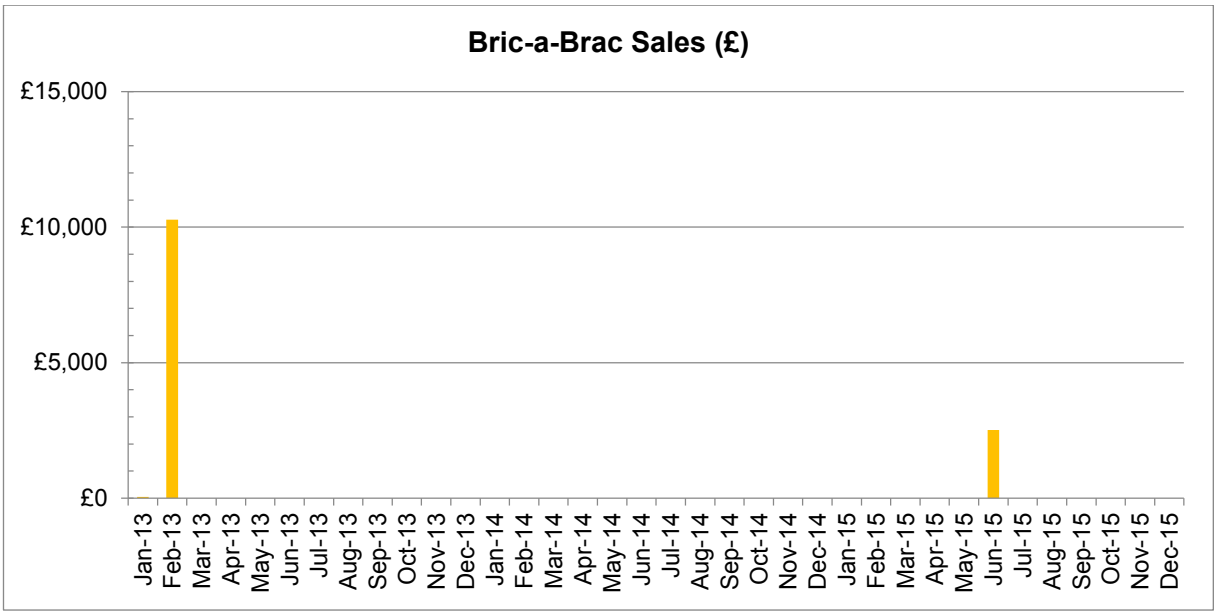


Media: This category represents CDs, DVDs, VHS tapes, computer games and some books. Sales are infrequent and have greatly reduced in volume over the three year period, indicating that markets for used media are also falling rapidly. This product grade presents a similar story to book sales, falling from a peak of 30,608kg / £6,136 in March 2013 to 1,240kg / £186 by December 2015. Sale prices have remained slightly more stable than for books, but have still fallen by 25% over the course of the research, making this product a poor business opportunity, despite consistent supply.

Media – Sale price per kg	
January to June 2013	£0.20
July to December 2013	£0.15
January to June 2014	£0.15
July to December 2014	£0.20
January to June 2015	£0.22
July to December 2015	£0.15

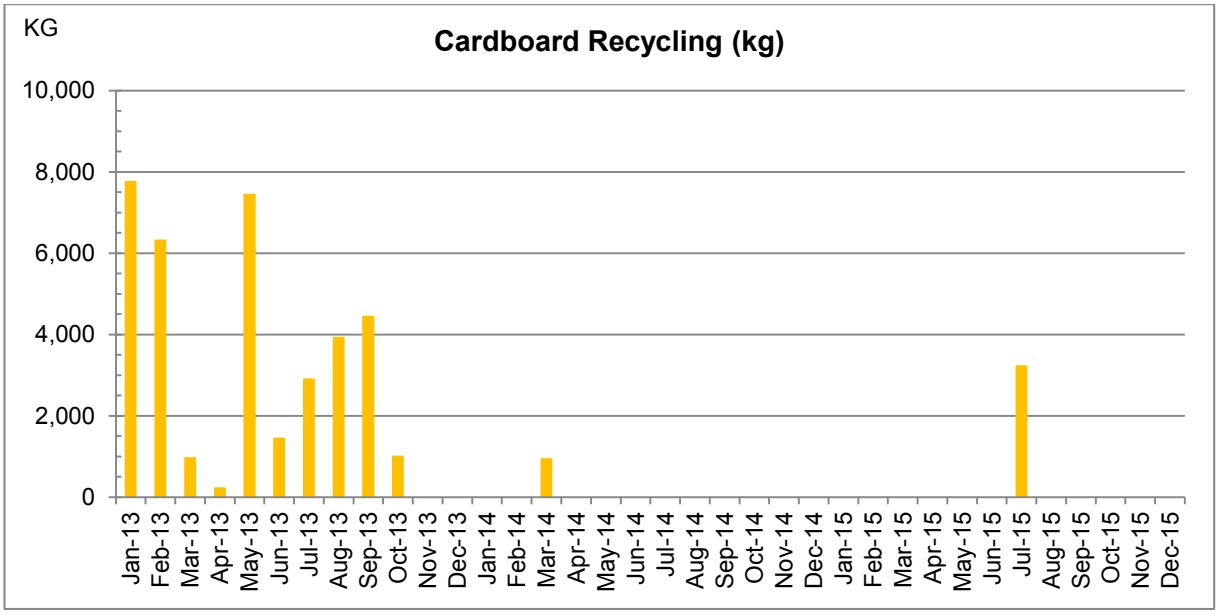
Bric-a-Brac Sales

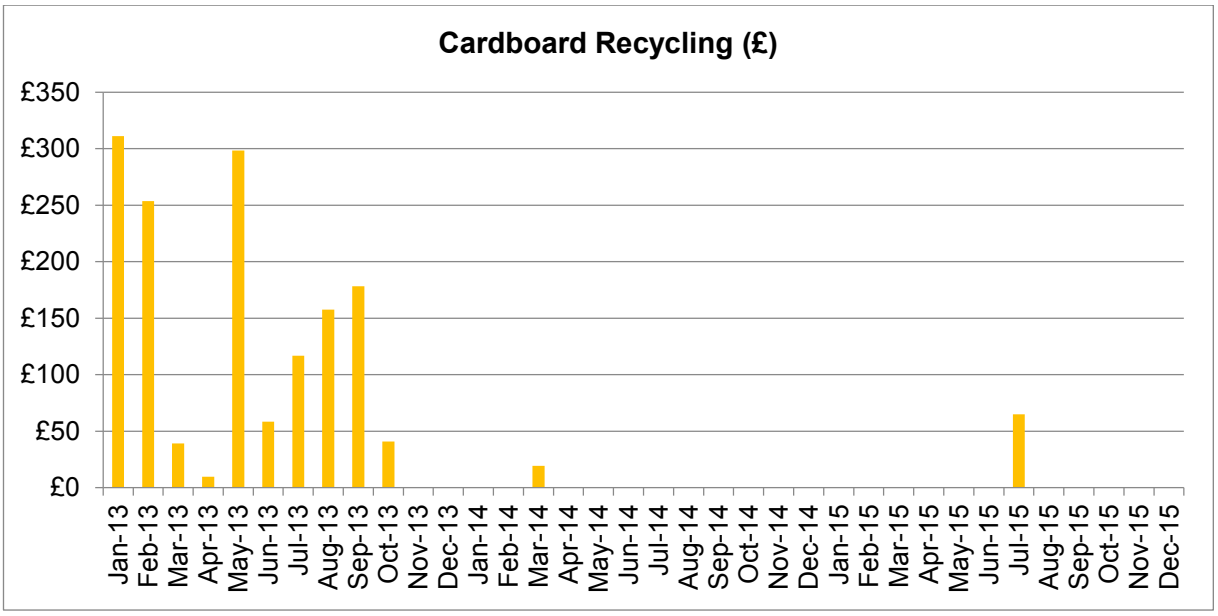




Bric-a-Brac: This category is made up of an assortment of non-clothing or textile items. Sales of this product are so infrequent it could be assumed that only a minimal amount of non-clothing items or textile items occur in the goods in collections, and items are allowed to build up over time, before a large enough batch is created for sale. Sale price has also fallen for this category over the study, from £0.50 to £0.35 per kg, indicating there is a low demand for these items.

Cardboard Goods Out



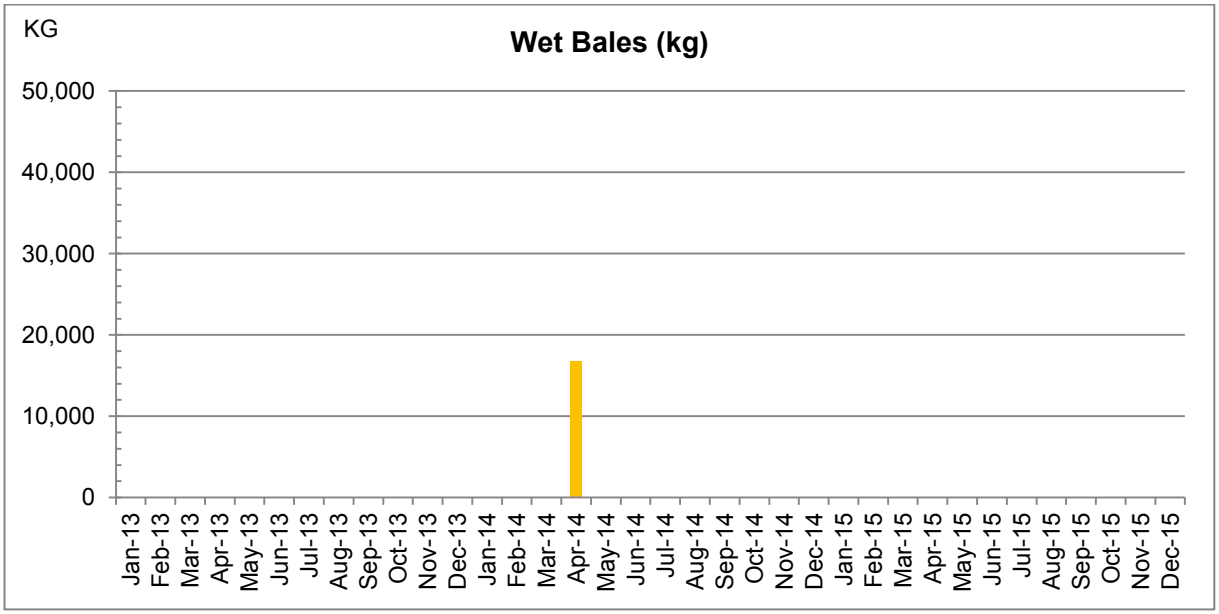


Cardboard: Cardboard packaging from goods entering the warehouse is sold on to local recyclers at around £0.02 per kg. This category provides a negligible revenue stream to the company. For this reason some data may be unrecorded or unaccounted for.

Charity Shop Sales

A single incidence of IGC selling charity shop grade product took place in May 2013, in which 7,420kg was sold around £0.75 to £0.80 per kg, making the total sale price between £5,565 and £5,936 for this quantity of unsorted grade product.

Wet Bales

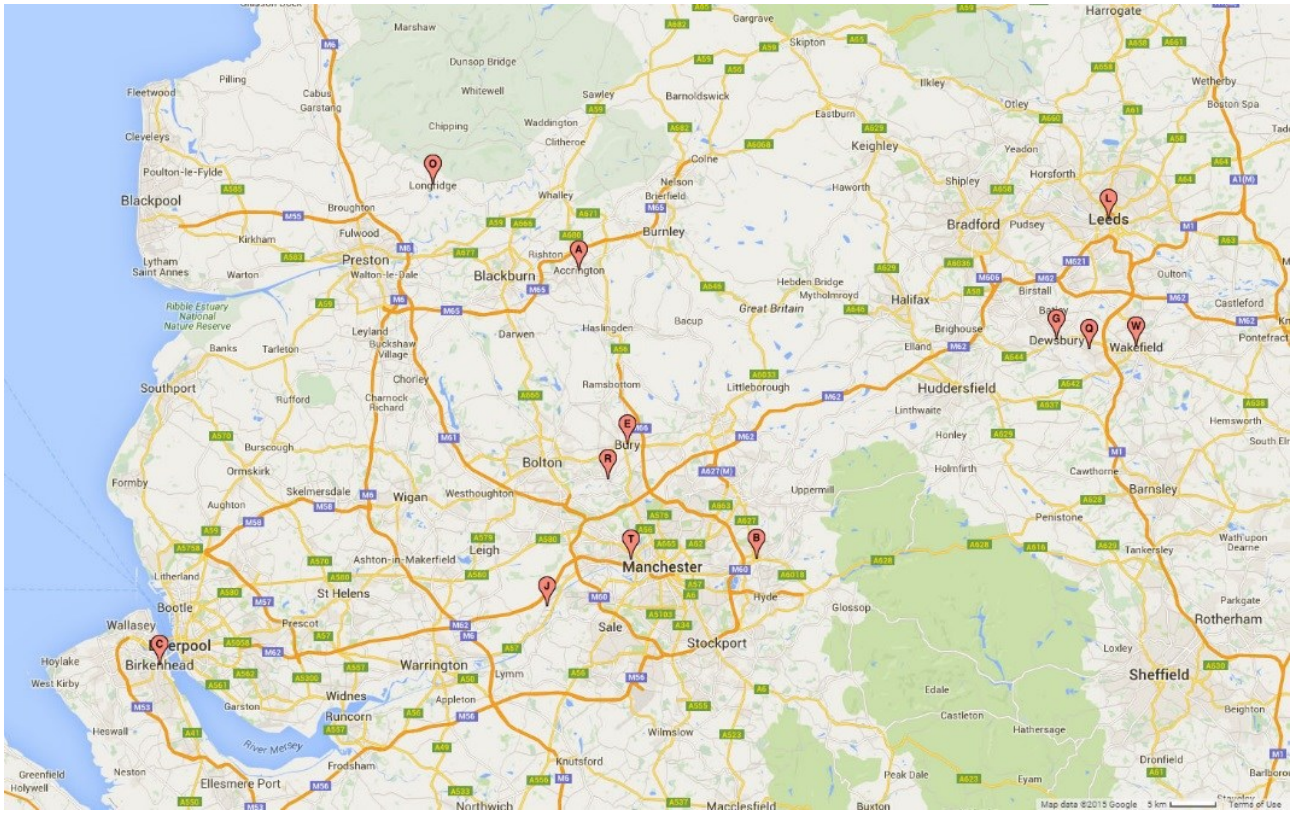


An additional category of wet bales indicates a trial in which a merchant took a truck load of IGC's wet bales to be washed, dried, sorted, graded and resold. This activity was not repeated, indicating that the process of collecting and processing bales of wet textiles was not financially viable.

10.1.9 IGC Export Locations

IGC export worldwide to locations around the UK, Europe, Asia, Africa and South America.

UK – North West



In the UK, around twelve customers are located within the same North West region as IGC. Sales are concentrated on customers in Bury, Birkenhead, Accrington and Dewsbury.

UK – National

In the UK, IGC sell to customers throughout the whole of England, with sales concentrated on customers in Harrow and Wellingborough.

Europe

European customers are located in Finland, Latvia, Lithuania, Belarus, Ukraine, Romania, Hungary, Slovakia, Poland, the Czech Republic, Germany, the Netherlands and the UK, with most sales going to Poland and the UK.

Africa

In Africa, customers are located in Kenya, Ghana, Tunisia, Benin and Togo, with most sales going to Togo and Ghana.

Asia

In Asia, sales are concentrated in Pakistan, especially Karachi.

South America

Sales have even been recorded in Panama.

10.2 Appendix B - Textile Collection Case Study 2

10.2.1 Textile Recycling and Aid and for International Development (TRAID)

During this case study, interviews were carried out with Claire Dawson (**CD**), the retail product manager at the Wembley site, Sarah Klymkiw (**SK**), TRAID's education officer and Zita Varga (**ZV**), shop manager at TRAID in Dalston. Also present at the TRAID shop in Dalston was Tanya Gold (**TG**), a Sunday Times journalist learning to sew at TRAID, who contributed to the discussion with Sarah Klymkiw (**SK**). Questions were asked about collecting activities such as collections, sorting, resale and reuse, as well as on TRAID's upcycling activities with the TRAIDremade label and on customers and consumers.

10.2.2 Collection

TRAID operate a network of 1500 textile banks around London and the South East, stretching as far as Bristol, Oxford and Brighton. A recently started new method of collection which they are calling 'bespoke' door-to-door collection, involves collecting from homes by appointment. This method has two main benefits of greater security, as collections are not left on the street, and of collecting higher quality clothes and textiles directly from donators, as summed up by **CD**:

> *"You've pre-arranged it, you've called us and said please collect my six bags of clothing, and it's scheduled. So it means that clothes don't get stolen, they don't get wet, it's secure, you are handing it over directly to the charity, not leaving on the street in a supposed charity bag when it's not actually a real charity, and it is going to the right people."*

The charity also gets commercial collections directly from fashion companies such as Topshop and Timberland. These consist of returns and production samples and donated items from in-store charity collection schemes. Some businesses also donate rolls of fabric or sample garments in good quality, as explained by **CD**:

> *"So for example we get Topshop's shop returns and we have a partnership with Timberland as well, so we get production samples and then they also do an incentive in store where you get 20% off if you donate your old shoes. And we've done some other incentives with them as well. So we've kind of work with businesses as well, sometimes they donate rolls of fabric. Sometimes it's samples, so that's quite good."*

Donations are also handed in at each of the eleven charity shops and these get sent to the warehouse each week, plus any unsold stock from the shops. Almost nothing is turned away as it can either be resold in one of the shops or to a wholesaler. Collection levels also fluctuate seasonally as described by **CD**:

> *"So at the moment we have quite high yielding banks, because its summer people are out donating, or at times of the year when people are swapping their wardrobe over. So kind of like April time and September it peaks, because people are swapping winter to summer or summer to winter. It drops off in February. Last year was very bad in March because it was so cold; people didn't want to swap their wardrobe and didn't want to go out because it was freezing cold. And then kind of end of November, December drops off as well. So it does fluctuate throughout the year, so we don't necessarily sort everything that comes in, there is kind of a bit of a left over."*

CD also highlighted that consumers are not donating as much as previously, citing reasons such as poorer quality clothing and personal resale motivations, plus increased competition from other collectors.

> *"Volume is going down and quality is going down. So we are having to do more work to get the same yields as we were 5 years ago."*

> *"Lots of factors, people hold on to their clothes and sell them on EBay, people buying lower quality clothing. So what you are going to donate? The quality is lower, you buy lower, you donate lower, and it's worn out by the time you have even worn it three times. There are so many people out there selling second hand clothing, collecting second hand clothing, and also paying for second hand clothes, 'Cash for Clothes', things like that. They are all direct competition. And now when you go to a place where you want to donate your second hand clothes, it's like there is bank for Air Ambulance, there is a bank for British Heart Foundation, there is a bank for TRAID. It is quite tough. "*

It is hoped by **CD** that the 'bespoke' door-to-door collections will mitigate these competing factors.

> *"The bespoke is our answer. The door-to-door collection. Because the reuse rate is higher on average for the door-to-door collections than the bank collections. So that is why we are focusing on expanding that, so that hopefully we will bring in less, but the quality will be higher. That is the plan."*

10.2.3 Sorting and Grading

Between seven to eight tonnes of textiles are sorted per day on the conveyor belt. Two workers feed items onto the conveyor belt and remove rubbish, bric-a-brac and books, making sure what goes on is just textiles. Six sorters pick items of the belt and sort them into categories and for each of the eleven shops. Shop managers also come in to the warehouse to select items for their shops on a regular basis. The shop managers are allowed first pick of items in order to select the best items for their shops. Each manager has a very clear idea of their target market and typical customer. Managers are also encouraged to pick according to their own style for their shops according to **CD**:

> *"Every day there is one or two shop managers that come and sort on the conveyor belt. So they go first, and get to select the best donations for their shop. So they know the area, they know the customers. They might be short on, I don't know, jumpers, they're collecting lots of extra jumpers, or they know trainers sell really well in their shop. They will collect those and they know the kind of style of the customer, so that works really well. And so each TRAID shop is slightly different, varying on the area and the taste of the manager. It is kind of a reflection of them and their style."*

Approximately 20% of collections are resold in the eleven charity shops, with the remaining 80% sold directly to a wholesaler who resorts for export. At the time of the visit there were 20 staff in the warehouse sorting. Grades included Premium, High Street, Basic, Children, Sari & African, Linen (Household textiles), Winter (mixed grade). The warehouse is operational six days per week from 8am to 4pm.

Waste

A small percentage of collections end up going to landfill after sorting as they are not suitable for resale. These include duvets, pillows and single unpaired shoes, as well as wet, soiled or damaged items and broken toys.

10.2.4 Packaging, Baling and Storing

Textiles could be observed packed into bulk bags and stacked ready for wholesale purchase or packed into trolley cages ready for the shops.

10.2.5 Distribution and Sales

Shops

Shops tell the warehouse how many trolleys they need each week, and then the clothes and accessories get sent to each of the eleven shops, loose in the trolley cages. Shops then sort, hang, tag and price the clothes and textiles for sale on the shop floor.

Winter stock for shops is sorted in summer and stored, as explained by **CD**:

> *"Winter (stock) for example, at the moment we are taking off, but we are not selling; but we are keeping it to go through again. We have sold the summer that is going out to the shops, children's clothes, etc."*

Stock is rotated between shops. Shops also sort some of the donations which come in to them depending on whether they have time and on the quality of the donations and time of year according to **CD**:

> *"So it might be that they have received H&M trousers, because they are a high street shop, but the trousers are quite boring and actually might be more suitable for another shop, so they might send that clothing back and just select the best things for their shop if they are a small shop."*

As previously stated by **CD**, shop managers also came to choose stock directly from the warehouse from their shops. This was elaborated on by **ZV**:

> *"We go usually on Saturday and pick up some stuff form the belt. It's one or two trolleys and all of the deliveries, around 6 or 7 trolleys. So not all of it is all chosen. We just try to keep one or two trolleys which we (pick) and the others which the warehouse sends to us."*

TRAID shop managers have been employed to have creative skills and fashion knowledge, useful in selecting stock targeted towards the demographic of the area. Managers are recruited from shop staff, ensuring they have a clear understanding of the customer base and the charity, as explained by **CD**:

> *"I mean quite a lot of people who work in the TRAID shops are quite creative. Some of them have fashion backgrounds or they are interested in clothing and vintage. It's kind of partly a requirement of the job. So most of them have that knowledge of fashion already, and then because we only recruit managers from within, so often they have already worked within that shop or other shops,*

they kind of know the customer base already before they become a shop manager."

Commenting on sales of vintage at TRAID, **CD** described how a fall in quality has affected the whole industry:

"Vintage is a very small percentage. Obviously we sell it for more money than say the Primark dresses obviously, but it is a very small percentage and the quality of donations are going down over the years, and this is not just evidence from TRAID, this is evidence from Oxfam, everyone. And that is lots of factors, people hold on to their clothes and selling them on EBay, people buying lower quality clothing."

10.2.6 Consumers

ZV described the main criteria in choosing stock for the Dalston shop's customers:

"We all the time try to pick up the things in nice condition, it's a nice brand and the things that are in fashion now. So I think these three things are more or less enough for them. And also this is a kind of trendy area. It's close to Shoreditch so that's why we try to pick up some trendy, very new fashion things. And also a lot of vintage because there is a market and we try to keep a bit cheaper than them."

Describing sales of vintage compared to sales of second hand clothing, **ZV** described how price and quality were important consumer considerations for their stock choices in store:

"The vintage section is just maybe 10 or 20% of the shop. So people more like the normal second hand clothes and also it is very, very hard to find nice vintage stuff. I mean it's not too 'granny', not for the church or something, very hard, that's why it's just a small section. People just really want to find some cheap second hand stuff which is nice. But in that store especially we try to keep the highest quality. That's why it is so successful I think, that store, we try to really pick up the nicest stuff. The nicest of the nicest!"

Commenting on engaging the public on sustainability in fashion, **SK** felt that appealing to people through craft and sewing activities was a non-confrontational method of broaching difficult issues. Both **SK** and **TG** felt that people would be put off if they were made to feel guilty about their choices.

"People don't want to be made to feel guilty so it's really difficult. We try and do it in a really... We dangle the sewing carrot and a lot of our education work in schools so they are kind of forced to listen to us." **SK**

"I'll tell you what people want – they want to be good but they want it to be easy to be good." **TG**

"They want it to be easy for them to live sustainably. They basically want to live sustainably while living in the way in which they lived when everything was unsustainable. They still want to live in a hyper-capitalist universe." **TG**

SK and **TG** outlined what they perceived to be the criteria for consumers as price, design, comfort and longevity:

SK: *"It's about design. If you make stuff that is well designed, people buy it. They don't buy it because it's ethical, they are buying it because it looks good, and that is essentially what clothes need to be. They need to look good.*"

TG: "*And be comfortable!"* **SK:** "*And be comfortable*."

TG: "*And long wearing*." **SK:** "*Yes.*"

SH: "*And then there is price as well."*

SK: "*And then there is price. I think price is the biggest factor.*

10.2.7 TRAIDremade upcycled collection

Sourcing

Only a very small percentage, roughly 0.3 or 0.5 of a percent of TRAID's collected textiles are used as source material for upcycled garments through TRAIDremade. This is usually the rolls of fabric which get donated, as these are far easier to work with, taking less time to process and cut from for the factories making the upcycled garments. Previously, garments from the conveyor belt had been selected for upcycling but a move away from this has been made.

"We are moving more towards using rolls of fabric that get donated, because it is easier for the factories to work with, rather than using garments, and also it is less time for us to process before we send out or for them to be processing. And as you probably realise from your experience and your knowledge as well, that it is just really time consuming. Not all factories are set up to deal with

that. They don't have the expertise or the experience or have the time really to do it." **CD**

"So I'd say we have enough variety to work with at the moment." **CD**

"So yeah, we are moving more towards using fabric, rather than using garments, but previously we have been collecting garments from the conveyor belt. So it might be jeans, it might be men's shirts to rework, t-shirts to print or embellish." **CD**

The fabric often originates with designers who decide not to use it:

"*So it's all pre-consumer waste, so either over orders or they've changed their mind on the fabric, but they have already placed an order. That's quite common. Beautiful Italian wool from Burberry, two seasons ago. They ordered it. It was the wrong colour red for them. It was beautiful, that kind of pillar box red. It's crazy isn't it. And there was maybe two rolls of fabric. So quite a lot. You could make a short run. So, yeah they just give it to us. Which is really great."* **SK**

Design

The upcycled design process at TRAIDremade works by first assessing what source material is in stock before designing the collection.

"We seem to have enough to work with, and it's a case of the designer really knowing the fabrics. Instead of a normal designer where you would just design your collection and then buy your fabric, you kind of have to work the other way around and look at what you have got, what stock is going to work, and then design into it." **CD**

Both **CD** and **SK** outline the way in which TRAID work with their designers has changed from an in house role to a collaborative relationship:

"At the moment we are changing our format slightly of TRAIDremade. So we did have a designer that worked for us 3 days a week designing the collection but now what we are doing is we are collaborating with other designers to design a collection." **CD**

"So we will be providing fabrics and they will actually be designing the collection and using their pattern cutting skills and everything to design the collection." **CD**

"The way we do the Remade now, is slightly different in that we have guest designers. A brand called Percival, which is based in Soho. Their designer Olivia has designed a range with the support of Clare who you met at our warehouse. They have worked together on the fabrics we have got and then it is being produced, I think at the same factory that we used before in Tottenham and I think it is being launched in Autumn Winter in September. I've seen a few drawings, but I've not seen anything else apart from that! It going to be slightly different from before, because obviously we had a designer who was working with us 3 days a week and now we are working with a brand instead." **SK**

Commenting on her time as an in house designer at TRAIDremade **CF** described how prints chosen (from vintage and retro household and furnishing fabrics) were the main appeal to consumers:

"But I really think what people liked about it, historically, was the prints. The dresses that they ran before I got there, people were buying the prints. The best prints would sell out the fastest. There was so much good stuff there, and really that is what would sell it, the fabric would sell it. I think for upcycling stuff, it is like a curation job." **CF**

Production

TRAIDremade pieces are outsourced to factories or have previously been embellished by artisans in India which the charity wants to support.

"These jumpers here were embroidered by one of our projects in Delhi. Home workers set up a co-operative, so we funded the project for 5 years and now they are a fully functioning co-operative. We worked directly with them to bypass the middle men who were exploiting them in direct links with the high street." **SK**

CD outlines the risks involved in short run designer collections:

"But then because you have a small collection all your production costs are really high but then if you want to produce more to get better prices, and then you produce too much, where are you going to sell it? And its risk again and you don't want to create waste, because you are about not creating waste, using waste." **CD**

Promotion

Both CD and CF commented on how difficult it was to promote the TRAIDremade collection, on the one hand needing to spend money on promotion to make it successful, but on the other hand not willing to take the risk on something which was relatively unknown:

> *"And also TRAIDremade is a crumb in comparison to us selling second hand clothing, to put it in context! As you can see 20% goes to the shop, 0.5% goes to TRAIDremade and actually it is probably less that 0.5, but yeah, it's quite small but TRAIDremade is good in terms of press and things, it's very good for TRAID, because I don't know, it reaches a bigger audience. It brings people in and it's kind of got quite a story to tell, about waste and textile recycling and upcycling and all the kind of things along the way, it's quite a good story to tell so it is good for the brand in that sense."* **CD**
>
> *"It's always hard kind of driving press. Also we have this thing, sort of chicken and egg, where we have a small collection because we are not very well known and it's a risk etc."* **CD**
>
> *"Because we have a very good system and set up for the second hand clothing and it really works, the processing, the shops, it is very profitable. It's very hard when we do TRAIDremade. In comparison it's not as profitable for a lot of effort. But in terms of getting the press and everything it's a really good story to tell. And it's always quite tricky."* **CD**
>
> *"But it is a marketing challenge, and that was the problem with TRAIDremade I think."* **CF**
>
> *"It was chicken and egg because they could not put loads of money in to it, because it wasn't making any money, so they could not justify a big spend, but then without putting something in and just giving it to someone three days a week to run, they were only ever going to get quite a limited return on that."* **CF**
>
> *"I felt like I went in like a whirlwind, I single-handedly produced 12, 13 and 14 piece collections for them, got it all manufactured, put it in the shop and they would say you don't need to do any of the rest of it, we sell it, we PR it, and then they just did not do anything."* **CF**

Sales

The TRAIDremade collection was previously sold in the Dalston shop and Brixton shop, although this will be changing for the coming season to a pop up shop in Soho. **CD** describes how selling the remade collection in a charity shop was a struggle:

> *"Selling the upcycled garment under a really as such, unknown label TRAIDremade, in our shops for more money than the second hand Burberry coat that is second hand is a bit tricky. So you walk into the shop, there is a coat, its £180, unknown label, TRAIDremade. It's made in the UK. So what? It's made from recycled fabrics. So what? There is a Burberry coat, and its £60, and its second hand, and it looks in the same condition as this brand new one that is stood here. Which one are you going to go for?"*

This was also echoed by **ZV**, commenting on how well the TRAIDremade collection sold in store:

> *"Unfortunately, because people are coming to a second hand shop, a charity shop and they just see these prices and I think, it was not their plans when they came. But we can't keep under that price because it is a designer who made it."*
>
> **SH:** *So in terms of the TRAIDremade, what sort of feedback have you had from customers?*
>
> **ZV:** *Yes, they like it, but everybody thinks it's too expensive. People like the idea very much, people like the style as well, and I think people want a part of it, to do the recycling. But this is the only point, feedback about the prices. Because you can buy a nice very famous brand on that same price as the Remade.*

The same sentiment was also expressed by **SK** and **CF**, who both recognised that customers in charity shops would not be looking for upcycled designer clothing:

> *"We don't make a huge amount of money from our Remade but we like to do it because it is a way that we can do our education as well. So we can go and try and inspire other people to do it. But it's a real fraction of any money that we make because it is so expensive to do upcycling. I mean that coat would be like £120, which I think is really good for a wool coat, but some people in our shop, amongst a lot of second hand stuff that is obviously a lot cheaper, you kind of have to buy into the story."* **SK**

“And the final collection that I did for them this winter, we put the prices all up, because we wanted to put more work into the clothes. Make them more amazing so that we could potentially wholesale them to higher-end boutiques and get them out of their stores. But in doing that made the manufacturing costs quite high. So then we put all the prices up. People were buying £120 Coats but then they would not buy a £180 coat. It really pushed it beyond, and that was again a problem with balance and everything, of it being in their stores, price point, whether the customer understood it etc. It was a huge range of stuff that needed considering.” **CF**

“And plus their way of selling it was very confusing I think, because it was in their shops which they know is a bad place to sell it, because for years it has been hard to sell it in their stores, so we talked the whole time I was there about how hard that is to work, because people might look around and see something that they like in Remade, but then probably find a bargain for 15 quid and just buy the second-hand thing instead. I think people do not go there looking for new stuff, and half the people that go in the shop just go there because it is cheap, they do not because they are ethical shoppers. They just go there because they are buying second-hand clothes because they have got no money. There is a big mixture of people that go in those kinds of shop and is not targeted, and they did not do the PR to make it a destination for that kind of product, which is what you would need to do. Even then it is still a difficult sell kind, it kind of needed its own shop, and they did really want to do that, all the time but then you never could justify spending on it. So it was just stuck basically.” **CF**

10.2.8 TRAID Photos

Collections

Figure 70. Collections delivered to TRAID, Wembley

Sorting

Figure 71. Sorting from the conveyor belt into trolley cages at TRAID, Wembley

Packing

Figure 72. Textiles packed in bulk bags for wholesale at TRAID, Wembley

Distribution

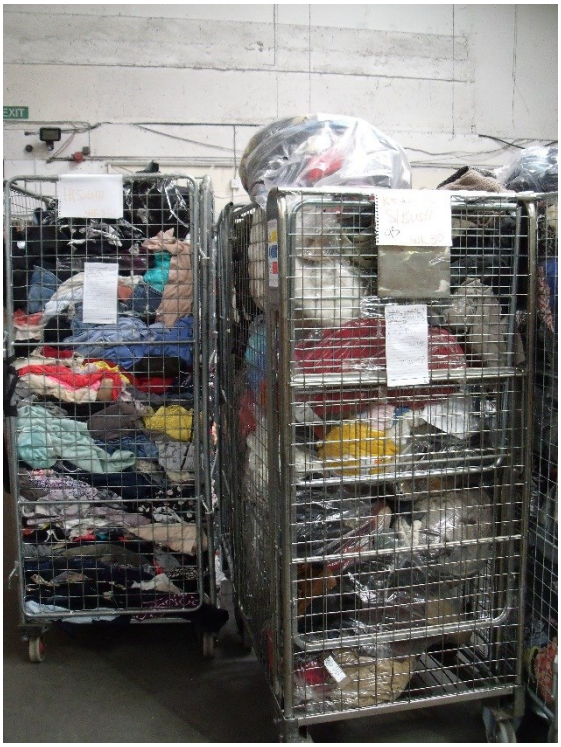


Figure 73. Trolley cages with new stock for TRAID charity shops

10.3 Appendix C - Textile Collection Case Study 3

10.3.1 Lawrence M Barry & Co (LMB)

One observational field trip was carried out to this case study on 19th November 2014, in which director Ross Barry (**RB**) gave a guided tour of the facility, explaining each of the collecting stages carried out. It was not possible to conduct an interview for this case study, however the following field notes and observations outline the company's activities.

10.3.2 Collection

LMB mainly collect from Local Authority Household Waste Recycling (HWR) centres. Around 20 large bins of around 1800 to 2000kg of used textiles (around 8000 garments per bin) are processed at their Canning Town site per day. Over 30,000kg of textiles per day according to **RB**.

As a source of textiles, the HWR is regarded as more reliable by LMB as 3 to 4 year contracts are secured. No contracts are secured with charity shops, who can ask for higher prices per kg, to match those being offered by LMB's competitors. Annual price reviews with HWR also ensure more stable business.

Quality is regarded as very varied from HWR sites, depending on regional location and whether the bin / bank was located at a local authority waste site (or 'tip') or a supermarket recycling centre.

LMB collect 50 tonnes per week from a particular site in Norfolk, and used to collect from a 20 mile radius from their location in London. They stopped collecting from charity shops about 15 years ago when **RB**'s father decided it was too much trouble regarding unreliable prices. They have since started collecting from some charity shops again more recently.

10.3.3 Sorting and Grading

Approximately 100,000 garments are processed each day but with planned extra storage being built on site, there are plans to increase this by 20,000. HWR bins are emptied onto a large conveyor belt, taking the bags of textiles up to the warehouse. When inside the warehouse, bags and rubbish are removed and shoes separated out from the textiles on the belt. Pillows and duvets are also removed at this stage. Shoes are bagged up and sold to a sorter in Dubai who roughly pairs shoes according to size

and colour. Bric-a-brac and WEEE items are removed for recycling. Textiles are fed onto two smaller conveyor belts which feed 2 trolley cages.

When full, cages are bar-coded and taken to one of around 30 sorters. Each sorter can process 1 to 2 tonnes of textiles per day. Each sorter has chutes in front of them corresponding to the specific African grades in their category (either men's, ladies' or children's wear). Textiles are sorted into these chutes by their garment type (e.g. ladies leggings, fleece, skirts etc.) and any which do not fit into these garment types are sorted into the wheelie bins in front of the chutes for either men's ladies', children's, mixed rag or recycling grade.

Numbers of grades in each category are as follows:

- Ladies' – 22 grades
- Men's – 10 to 12 grades
- Children's – 10 to 12 grades

Around 40% of the textiles in the cages are of recycling grade, with 60% suitable for reuse. Premium grades are prepared for Eastern Europe and the UK. Then African grades, grades for Pakistan and then recycling grades such as cotton wipers and wool flocking grades are next. Around 30 tonnes of wipers are currently sold per week in the UK by LMB at a loss. The company used to sell wipers to the printing industry but digital printing has eliminated this demand.

After the first sort into the appropriate chutes, wheelie bins of men's, ladies' or children's clothes are then taken to the appropriate sorter for a 2nd sort. Sometimes an initial sort (into men's, ladies' and children's) is completed by inmates at HMP Highpoint, so this can cut down the sorting time. LMB changed to the double sorting method currently in place after using the belt sorting method initially. The conveyor belt in the warehouse is now just used to transport textiles up from where they arrive, into cages and onto the sorting floor, while rubbish and shoes are removed along the way.

Sorters also pull out a small percentage of premium or 'crème' grade garments for the UK and Eastern Europe. These are carefully re-sorted and bagged up ready for a wholesale client, who purchases all of LMB's crème grade textiles. These bags are stored together, near to the bales, also ready for dispatch.

One sorter could be seen sorting collections from ‘cash for clothes’ shops. **RB** considers collections from these shops best quality, contrary to **PG** of IGC’s opinion of cash for clothes collections being poor quality.

Waste

Pillows and duvets are removed from collections to be disposed of. It is hoped by **RB** that Worn Again may be able to find a way to recycle this bedding, thus providing a new market and extracting increased value from collections.

10.3.4 Packaging and Baling

The packing, baling and dispatch of textiles takes place downstairs of the sorting floor. Once sorted the African grades are baled into 45kg bales by 2 members of staff on one continuously working machine. Each bale is given a bar code corresponding to a printed packing list regarding its contents, destination and purchasing customer / merchant. Bales are piled in lots of 6 ready to be loaded into customer’s shipping containers. Per week the output averages around 25 tonnes / 540 bales / 2 to 3 containers. Output had peaked at 1 container a day in the past but this is no longer the case.

LMB use branded cellophane to wrap their bales and it has been known for fraudulent competitors to reproduce this packaging in order to create ‘counterfeit’ bales for sale. Shoes are also packed into bulk bags unpaired, to be later ‘paired’ by colour, size and type by the purchasing organisation. E.g. all size 9 black brogues.

Denim too worn out or damaged to be reused is baled for recycling into wipers. End-of-life textiles form laundries (what appeared to be sheets and medical scrubs) were also being baled for recycling into wipers. The baling machine for the recycling grades has been with LMB since 1992 and was second hand to start with. Ross told us that it normally breaks down at least once a year. LMB also have 2 driers on site to dry damp garments. No washing is done on site.

10.3.5 Distribution

The majority of LMB’s sales are to the African market where LMB have regular customers based on their reputation for bales of reliable quality. A merchant will buy a whole shipping container and sell bales to stall holders. Merchants buy their containers on 50% credit, with 50% of each sale paid up-front. The merchants are relying on selling to stall holders to make enough money to pay for the 2nd half and make some profit.

It is **RB**'s opinion that Nigeria is the biggest SHC market in Africa, but as it is illegal to import SHC this results in corruption in the form of payments to officials. In India it is also illegal to import SHC, so garments need to be 'mutilated' with 4 slashes for them to be legally imported.

10.3.6 LMB Photos

Collections

Figure 74. Collections are transported into the sorting facility by conveyor belt at LMB

Sorting

Figure 75. Sorting into chutes at LMB

Packing

Figure 76. 45kg bales are packed at LMB

Distribution

Figure 77. Bales are labelled and stacked ready for distribution at LMB

10.4 Appendix D - Circular Economy Fashion Interviews

10.4.1 Themes, Sub-themes and Key Quotes

10.4.1.1 Theme 1: Consumers

10.4.1.1.1 Sub-theme: Consumer's own knowledge

It was felt that although consumers did know that their consumption behaviour was contributing to wider problems in the industry, they were unwilling or unaware of how to do anything about it. This was seen more as a fault of the industry than of consumers.

> *"I think that consumers are very savvy and they think there is nothing sustainable about fashion."* **CS**

> *"I just think that the whole notion of this consumer focused industry creates a lot of cognitive dissonance. So where you kind of know that the whole consumerism thing is really, really terrible but at the same time, your whole entire life's worth is based on how much stuff you can buy and you kind of just ignore the part where you feel slightly uncomfortable about buying things all time and just thinking about where you feel 'yeah it's ok, I'll just buy more stuff to make me feel better'."* **CS**

> *"Consumers are insanely uneducated, and if only they were educated about one thing it would be about fast fashion and the amount that we consume."* **NC**

> *"It is a consumer fault of how the industry is, because the industry is purely trying to supply what the consumer wants and this is where we have ended up."* **NC**

10.4.1.1.2 Sub-theme: What it is important to know about consumers

When asked what information was most important to know about customers, after initial uncertainty from some informants, it was once again expressed that on the whole, most consumers did not care about social and environmental issues to do with clothes. It was most necessary to know what they were willing to pay, what sort of styles and designs they were looking for and what the gaps in the market were which could be filled. Knowing how much they typically spend, where they shop, how they dispose of clothes and why were thought to be key areas too. It was felt that sustainable fashion should appeal to consumer chiefly through its aesthetics, with ethical credentials a given but secondary factor.

10.4.1.1.3 Sub-theme: Consumers don't care

It was felt that consumers were unwilling to take the wider impacts of consumption into consideration and that products needed to appeal on design and price to convert consumers into buying sustainably.

> *"Still to this day, a lot of these people don't really care how their stuff is produced and what kind of knock on effect it has on different communities and the environment, so I think although it is important for most brands, we have always tried to convert people, and look for just real people who are into kind of cool street culture and this kind of thing and have the ethics as a secondary point of sale, if you like. So, yes, obviously it is important to know demographics, age, buying habits, gender, what kind of music they listen to, from our point of view."* **GL**

> *"I think most people, if you're selling to shops on the high street and stuff like that, you've got people that don't really care, and they are buying it for design and price."* **NC**

10.4.1.1.4 Sub-theme: Knowing what consumers want

Importance was placed in knowing the characteristics of the products were to be sold in, such as what would appeal to consumers in these markets in terms of wants, needs and preferences: *"Knowing your market."* **GC**

> *"What they want. That could mean anything from function, style, price, ethics... it's got to be what they want what they need. It either something that is desirable or something that performs an exact function for them they really want. Or both."* **CF**

> *"I think for me the problem with trying to work out what people want in terms of ethics is that, I think quite a lot of people just want to not think about it. What they really want is just to know that everything is OK without them having to do anything to find that out."* **CF**

10.4.1.1.5 Sub-theme: Knowing what consumers will spend

Knowing what price ranges customers were looking for was also of key importance.

> *"How much they will spend and what sort of designs they want, and what market you're going for."* **NC**

> *"Comparing it to other prices and what we could actually do it for."* **GC**

"Customers are ready to pay more for a designer piece but not extremely more so it has to be in a range of, for example, they are ready to pay €150 for a pull over, for a jumper, but they are not ready to pay €250. And this means the designers, they have to know exactly what their target group is and try to keep it as simple as possible in the cutting and sewing phase." **AN**

"What price it should be? If I can, how I can make it at that price?" **NC**

Price was recognised as being the most important factor for consumers, who often want the lowest price possible:

"And so for the ASOS customer there was very much a focus on making sure we have the right product at the right price." **CS**

"It has to be at the right price. You have something well designed, well styled but it is too expensive, then there is no chance that people are going to buy it." **CS**

"They want the latest thing, and they want the cheapest price." **NC**

However for upcycling designers, making garments priced comparatively to the high street has been an ongoing issue.

"People were buying £120 Coats but then they would not buy a £180 coat." **CF**

"Generations now don't know how much work goes in to make something. You get a lot of people who are just like can't you just make a skirt that would be £20? And we are like no! That is not how long it takes." **GC**

"I think our garments are priced comparatively to the high street. Our price point goes from £30 to £100 / £120 tops. And that has been really important, because I felt, you can't talk about trying to compete with the likes of Topshop and Primark if you are then producing something that costs £500 because it's incomparable. We are trying to change consumers to thinking about buying one thing that is going to last, and not ten things, so you know, if you can normally buy a pair of leggings for £4, which I am sure you can, ours cost £30." **LH**

Although it was recognised that the issues is also confusing for consumers.

"But I guess for consumers the really confusing thing is now, you spend £200 on a dress, you spend £50 or £60 on a dress, the quality is not necessarily better, the mark up doesn't suggest what it used to suggest." **CS**

"They might spend £100 on a designer t-shirt, otherwise they think they should pay a fiver." **CF**

It was also recognised that consumers shopping for second hand clothing were driven by low prices more than the environmental reuse aspect or social charitable aspect.

"People just really want to find some cheap second hand stuff which is nice." **ZV**

10.4.1.1.6 Sub-theme: How to design for consumers

It was however acknowledged that how the products are designed and how they look was the most effective way of appealing to consumers.

"*I think my kind of view upon it really is that there is no real market for upcycled clothing; it depends a lot on the designers. And so I think mainly, actually it's down to design."* **NC**

"So the price point is really important, but before the price point, the design has to be absolutely right." **CS**

"The first thing has to be of course the design. If the design is not nice there can the best story behind, but it won't sell. So the design has to be nice, has to fit to the target group." **AN**

"I think the most important thing they need to know is that the customers care about what the product look like." **CS**

"You've just got to make a really great product. It's got to be what people want." **CF**

"We try and be design led." **GL**

"It's whether they like the product at the end of the day. And are willing to part with their hard earned cash for it." **JC**

"You are not going to sell a product based on it being wonderful for the environment or society if it doesn't measure up in terms of its aesthetic qualities." **LH**

"I can look on Google Analytics in the backend of my website and see how people have landed on my website, and then I can see what is converting into sales...

... they are not putting in sustainable fashion...

...they are looking for a garment, and they hit our website, they see what they want, they realise it's a good price and they buy it..." **LH**

"I think mainly, actually it's down to design and then you get put into other markets, with other competitors." **NC**

"You've got people that don't really care, and they are buying it for design and price." **NC**

"The fact that clothes need to look beautiful in order for them to be sold is of course a matter of fact." **OdC**

"The designers, they have to know exactly what their target group is and try to keep it as simple as possible." **AN**

"It's definitely seeing what the gap is and what we have got, evaluating whether it is possible." **GC**

It was recognised that any customers converted would most likely be buying sustainable fashion because of the design and not the ethics.

"I think the main thing is that the designs are cool, and not too crazy and wearable. Of course it is cool if the designs are wearable in everyday life. This is also really important and I think it is something the industry didn't get, that upcycling doesn't have to be crazy. That it can also just fit in the range of designs. And their collections." **AN**

"My customers would say that where it's made is one of the most important things to them and mark it down as one of the most important things, but would still never buy anything that they didn't like." **NC**

"So as a company we really want to cross over and be accessible to people and try and get a consumer group that's not really interested in sustainability or buying unsustainably and get them buying, just because they like it and they want it." **NC**

"*It's best to provide a product which they desire and that they wish to buy without necessarily making a great big song and dance about it being sustainable."* **OdC**

10.4.1.1.7 Sub-theme: Uniqueness of designs

The unique aesthetic and one of a kind exclusivity of upcycled designs was recognised as something consumers found appealing.

"We get a lot of people saying that they like the unique aesthetic of it and the fact that is it limited edition, which is inherently connected to the fact that it is upcycled, because if it wasn't upcycled then it wouldn't all be limited edition." **LH**

However questions were still raised about the how this works a mass scale in high street stores.

"If people buy something from a concession in Topshop, do they like that because they think they are supporting a small label? Or are they buying that smaller label because it's a bit more exclusive and less people will have it, or it's more unusual? It would be interesting to find out those things." **CF**

"I have absolutely no idea. I mean obviously you have to understand that upcycling is a signature. And so therefore, whoever it is that's buying, you know, there's not much point in going to sell upcycling to somebody who wears ACNE full on. But I would have assumed that it is the other way around. That it is the consumer that needs to know what the upcycling designer has to provide." **OdC**

10.4.1.1.8 Sub-theme: Do they buy for quality?

Confusion was expressed about whether consumers actually do demand quality in clothes and how they view the quality of fast fashion.

"*If consumers were demanding well made, quality, designer clothing, and were willing to pay a bit more money for it, Primark would be making a well-made clothing!"* **NC**

"That would be very interesting, to know people's opinions towards fast fashion and quality." **NC**

"But really I think people just want things that are good. And I don't know what it is that they think is good about them. That would be the thing that you want to find out." **CF**

As mentioned with pricing, quality could be seen as a confusing issue for consumers, as higher prices do not always mean higher quality.

"Before it used to be pretty much guaranteed that if you paid more for a certain item you would be getting better quality but because of the amount of money that goes into marketing, shipping, that kind of thing it is really quite difficult to figure out where the quality lies." **CS**

CS described an idealised situation in which consumers would buy clothes for quality instead of trend, as part of a carefully curated and versatile sustainable wardrobe, however this was not felt to be a reality.

"You are buying pretty much for quality and for the love, and not because you are so consumed by trends." **CS**

10.4.1.1.9 Sub-theme: Do they make investment purchases?

Only one of the key informants interviewed, **CF**, mentioned buying a high quality item as an investment as something that would interest consumers.

10.4.1.1.10 Sub-theme: Do they buy for function or need?

CF was also one of the only informants to question whether consumers sought functionality and high performance from their clothing, citing the growth of high tech textiles performing functions far over and above what the average user needs.

"I am interested in whether people want things to perform that well." **CF**

CF was of the opinion that consumers were looking for something desirable or something which performed an exact function, or preferably both, however, discussing the buying decisions at fashion retailers ASOS, **CS** spoke about products having to be 'right' in their combination of style, design and price, not mentioning any functional or performance aspects.

10.4.1.1.11 Sub-theme: Social status and stigma

Social status was also recognised as a factor for consumers, wanting certain brands or designer labels. It was also recognised that many consumers also felt a stigma towards buying and wearing second hand clothing.

"But then a lot of people don't like buying second-hand clothes because they think it's dirty. They just don't like it." **NC**

10.4.1.1.12 Sub-theme: Do they care about ethics?

For many of the informants question arose about whether consumers actually cared about the ethics of how their clothes were made.

"I would be interested to see how big a consumer group there is to actively buy sustainable clothing specifically, and only sustainable clothing." **NC**

"The consumer that is not interested in who makes your clothes or ethical issues is a very difficult consumer to sway. So the level of conversation with them tends to be fairly futile." **OdC**

Many felt that consumers were not interested in ethics, however, in connection to the unique in-store experiences of ethical brands, designers at the FARA Workshop reported success in presenting the manufacturing process as a part of the shop, in which customers could directly meet the people making the clothes and see the decent working conditions.

"So you can go over and see, you can find out exactly who made your dress. A lot of people do that. I think it really works both ways. It is so nice for the makers to see someone walking out in something they have just made. It is really rewarding. I think that is really important for both of them, both sides." **GC**

However, even with ethical brands, it was still recognised that ethics are secondary to design and desirable products in order to appeal to consumers.

"There are more and more brands that are doing things, whether it's sourcing organic cotton or working fair trade, where that is not necessarily the first thing that they are talking about. It's about good design and it's about products that people actually really want, but then all that information is still there and they are doing those things but it doesn't necessarily have to be the first thing that a brand has to talk about." **JC**

10.4.1.1.13 Sub-theme: The values-action gap

There was still uncertainty about how to convert customers who expressed sustainable intentions into actual sales, and in knowing more about the consumption behaviour of fashion consumers. The 'values-action' gap between intentions

expressed and actual purchasing behaviour was also recognised as being an issue for ethical brands.

> *"Although people say they have firm values in that they want to buy; things that have been made in an ethically sound way and are responsible and don't hurt animals, all these things. When it comes to the point of sale, it is very hard to make that connection – with their values and what they are about to do with their money and that kind of fashion, which is so all consuming. There are some questions there around how can you join up those personal value that consumers have with the actions that they make when they actually buy something."* **LH**

> *"What do we need to close that gap? Is it better marketing? Is it better advertising? Is it better sex appeal? Is it better kudos with your friends?"* **CS**

> *"But I think really what I want to know is where do you shop, what do you buy there, how often do you buy it, how much do you spend on it, how long does it last, why do you like it? If they buy things that are disposable, why?"* **CF**

10.4.1.2 Theme 2: Communication

10.4.1.2.1 Sub-theme: In-store

It was felt that high street brands are now doing more than ever to provide a unique shopping experiences in store, online and through marketing. This is in order to sell products through their supposed transformative lifestyle attributes.

> *"I think what is interesting about shopping is that we have gone from selling people a product to selling people a lifestyle."* **CF**

Ethical fashion stores now have to compete on this experiential quality and offer customers something which is not available on the high street. For many of these brands it is the personal and unique experience of shopping for handmade goods, with knowledgeable brand owners on hand to advise and share the stories of the products that appeals to their customers.

> *"For us it is really easy because we have the shop. So we can just talk to them directly, and ask and get all the feedback."* **AN**

> *"We could really see that people coming in the store now – 80% of them, they know about upcycling now and they know about sustainable fashion, so it's*

already a big step because this means that they come to buy, because they want to buy this kind of fashion and not something else." **AN**

"So I think for us it's just having a shop. We just start getting direct feedback. We know customers like and what they don't like." **AMH**

"I think when they come in here as well, they like it because it is not mainstream, so it's individual pieces, it's not mass produced, they are a bit different, the pieces. I think it's how we display it as well, makes people feel that they are getting something special." **AMH**

"The way we communicate with our consumers is through lots of different streams so really direct, face to face, in the shop, we do newsletters, we are on social media, we attend events, we give talks and presentations about various things." **JC**

"The main way that people can respond back to us is when they are here face to face." **JC**

The opportunity to speak to consumers in-store and connect them with the stories of the products was the key to consumer understanding which converted into sales and feedback.

"And just the shop as well, absolutely says who we are and we don't employ people to sit in here. It's us who run it, and it's our business, so you come in and you are speaking to a designer and someone who makes and someone who is in it, so that's the biggest way we can communicate who we are to people." **AMH**

"I think what we bring across to our consumer is that they can ask us questions and we can tell them where things have been made, how they have been made." **AMH**

"Our work is mainly talking, talking, talking and not trying to convince people to buy, (but) talking about the history of the clothing and what the designers are doing, and try to give and build up an emotional link with what we are selling, it's really important for retailers in upcycling and then the people they feel linked, they feel involved in the whole story, and then they buy easily." **AN**

JM also talked of a viable alternative to the high street being appealing to consumers through the aspect of well-being.

10.4.1.2.2 Sub-theme: Social media, PR and press

27 references were made to social media on 11 occasion, and 58 references to press and PR were made on 12 occasions indicating that although these are sub-themes under communication, they are key concerns for the brands. Concerning their own communication with consumers, social media was cited as the main method, although one informant used a PR agency and another had a dedicated member of staff looking after social media and promotion.

> *"So we have a blog, we have Facebook, we have Twitter now. Yes these are our social media. We use a lot."* **AN**

> *"One thing that we did do was that we set up an ASOS Green Room account on Twitter."* **CS**

> *"A lot of social media. I mean social media is so good for the charity. We invest a lot of money in that and the marketing side of it. So social media is a great way of connecting to local businesses and things like that."* **AC**

> *"Obviously since social media has come along it has been a lot easier to kind of gauge who your audience are and directly market to them."* **GL**

> *"We've got quite a good following on Facebook, we've got about 13,000 followers (14,125 followers on 10.07.2014), and through the site, we just try and subtly give people a nudge in the right direction."* **GL**

> *"I think our clearest voice is probably through social media. I think that's the kind of constant voice. I think social media is our main route."* **LH**

> *"Becky does a lot of work around trying to get pictures and evidence of people wearing stuff from seasons ago, now. So a lot of that goes out on Facebook and Instagram, which is, for someone who is wearing a jumper from however many seasons ago, now – looking good in it now and the jumper looking good now."* **LH**

> *"Yes we have a PR agency and of course we have a list of 50 to 100 magazines. This is our press contact through the PR agency that we had to choose at the beginning and of course they are all normal mainstream fashion magazines. Really important. Because the eco magazines and bloggers, they come to us anyway, no? They know. But we have to reach the others."* **AN**

Using social media as a way of communicating the voice / ethos of the brand, not just selling products:

> *"We are very active on social media so that is always about getting our messages out there. It is about promoting other people as well, about sharing other stories and being an active voice within that kind of conversation."* **JC**

> *"We have Facebook and Twitter account, and generally I try and put things and talk about things that we're up to, but I will also put interesting articles on the environment or interesting stuff that is sort of more information and fascinating information, quite a lot of things about science and things t*
>
> *hat will be engaging. We don't really put anything fashion related up. It's more about interesting stuff and facts and things like that."* **NC**

> *"Anything that is for fashion, is the same for sustainable fashion. So if bloggers are considered to be paramount for regular fashion, then obviously they perform exactly the same role when it comes to sustainable fashion."* **OdC**

> *"Twitter and Facebook are of course great ways to engage with customers and get an instant response, but doing events to actually meet people is always key."* **RC**

> *"Everything on our website, there is a lot of information on our website. People can go on there, they can read all who we are as individuals, our philosophy and our approach, about all the brands and designers that we support. We are very active on social media so that is always about getting our messages out there. It about promoting other people as well, about sharing other stories and being an active voice within that kind of conversation."* **AMH**

10.4.1.2.3 Sub-theme: Big brands using social media

For the micro and small fashion enterprises represented in this research, social media functioned as a way of communicating a message about what the brands were doing differently or sustainable. For large multi-national brands, social media can operate in the reverse, with customers providing market information and asking questions to the brands.

> *"It tends to be quite different when you've got someone like Marks and Spencer's or Nike who suddenly decides to start look at sustainability and bringing it into their brand. They do huge amounts of customer profiling and understanding. Quite often it seems to be coming from the feedback*

mechanisms they have on their social media, through their blog, through their website. Customers are asking them the questions, and so it seems like it's the other way round. These smaller brands maybe haven't done that step." **LH**

10.4.1.2.4 Sub-theme: Communicating upcycling to consumers

In communicating upcycled fashion to consumers, it was felt that appealing to consumers through the design and style rather than the ethics was the most successful approach. Once attractive designs were an established factor, consumer understanding of terms, care practices and provenance would add to the confidence of customers in making purchases.

"Then the best is to start from the design side and show how cool the design is. And how you can use materials that were already used. And then you can get them there and then you can start asking 'Are you aware of this, are you aware of how much textiles are discarded every year etc.'" **AN**

"We communicate our ethos through our design. Upcycling is a technique which marries itself very strongly to a very particular aesthetic. The clothes tell a story simply in the way that they are designed." **OdC**

"Another thing that for retailers is important to know is how to sell upcycling. It is a really important thing because our work is mainly talking, talking, talking and not trying to convince people to buy, (but) talking about the history of the clothing and what the designers are doing, and try to give and build up an emotional link with what we are selling, it's really important for retailers in upcycling and then the people they feel linked, they feel involved in the whole story, and then they buy easily." **AN**

The language used could also put off consumers or attract them, depending on what their understanding of the terms used was.

"Quite often I find it just comes down to semantics, so it's just the language that you use to discuss whether something has been recycled or reused or reclaimed or revalued or upcycled." **LH**

"I mean sustainable fashion is an oxymoron anyway. It is a really kind of nonsense term. Because you can't have sustainable fashion. You can have a sustainable wardrobe. You can have sustainable clothing but sustainable fashion is just a non-entity. So I think that a lot of work has to be done in the

way that we use our words and the kind of lexicon we use to be clear about what we mean about sustainability in clothing." **CS**

Consumer understanding of upcycling also presents a challenge in terms of laundry and care practices, when garments are made up of multiple fabrics and fibre types.

"From some of the research we've done, consumers are a little bit apprehensive of garments that are made up of multiple fabrics, about actually washing them and how they are going to deal with them." **LH**

"In terms of upcycling, it's really about the understanding that it is a second hand material, not only in terms of how they value it, but also how they respond to the implications of how they are going to care for it." **LH**

"I think there needs to be a great understanding about how you explain that care (of upcycled garments), because so often you write in the label 'mixed fibres', because you might not even know yourself what is in it, and then you are passing that not really knowing on to the customers who then has to deal with that. I think there is something around the practicality of owning something that is made of a patchwork of other things." **LH**

The unique and limited edition aspect of upcycled design appealed to Antiform's customers, however it was felt that for the vast majority of fashion consumers, the same stigma which applies to second-hand clothing also applies to clothes made from second-hand materials.

"In terms of upcycled fashion, I think, from the experience we have had there is still a huge barrier around the idea of something that is second hand. So I think it would be really interesting to unpick that a little more and understand it." **LH**

Because of this, consumer views about upcycling were called into question.

"It would be interesting to see people's perceptions of upcycling. I would guess that it probably wasn't a very favourable opinion." **NC**

10.4.1.2.5 Sub-theme: Story and emotional link

44 references were made on 14 occasions to this communication approach, indicating that the informants often felt that when communicating the ethical aspects of garments, consumers found human stories about workers easier to connect with than more abstract ideas about climate change and environmental degradation.

SH: *"Some of the other designers that I have spoken to have expressed a sort of feeling that when it comes to communicating with consumers it's almost more successful to talk about the human stories behind how the clothes were made and where they have come from or what they used to be rather than the environmental impacts and the facts around that, the chemicals, the toxic pollution, things like that. Do you think that...?"*

LH: ***"****I think that is the case. I mean that's the story that the interviewers normally pull out. Especially with the awareness that Fashion Revolution day has raised around Rana Plaza and that kind of aspect. I wouldn't say there is nationally a raised awareness of conditions in factories but I think you have hit on a point that it is easier to talk about that than it is to talk about environmental degradation through the processes."*

"We just try and communicate our message through graffiti, through art work, through positive vibes instead of the whole negative shouty kind of thing." **GL**

"I think really the hard line of saying, well you should care about the environment, you should care about human rights, all of that stuff is, it is difficult to come at people with a product that is actually quite superficial, in an industry that is quite materialistic and sometimes a bit shallow. It is difficult to come at people through that with a good cause, for me I think what is more interesting to people than 'Hey this is made out of old plastic bottles and that is really right on!'; I think people are more interested in knowing who has made it, where the fabric came from, if it had a story." **CF**

"It would be interesting to know whether people think about where clothes are made, whether they are aware of issues about fabric, and how fabric is made, and where fabric is made and the environmental impacts of that. It would be really interesting to find out what people think about fast fashion and whether they want something with a bit more of an emotional attachment or not." **NC**

10.4.1.2.6 Sub-theme: Market research

When asked about their current strategies for market research responses ranged from those who had worked with larger retailers attempting to implement sustainability into their main offerings saying that market research was not a priority, to the majority of brands saying that they knew they needed to identify their market and that talking to their current market was their main form of market research.

"It wasn't really a priority for the people at ASOS." **CS**

"That is something that I feel I am very much lacking and I am actually thinking of trying to get a marketing kind of advertising person involved in our next project that we are going to do." **NC**

"I first started seven or eight years ago and I've learnt so much and made a lot of mistakes along the way. It would be quite good to collate all that information and actually really think about a product that could work and the market for it." **NC**

"It is about finding a market really, really fast so that you do not waste loads of money on a product that no one wants." **CF**

"Lots of just talking to people at festivals, at trade shows and at retail events and trying to get people's opinions." **GL**

"We always try and work out who they actually are and why they are motivated to buy." **LH**

"We do it through a software programme called Woobox which is like a competition plugin software which will go out through our social media and then bring all that information back to us. So we can ask people why they buy, simple things like why do they choose to buy us, just to see if the responses coming back are about aesthetic quality of what they are buying or about the ethical credentials of what they are buying, because it is very hard for us to actually know whether our main customer base are buying because it's just a nice t-shirt or whether they are buying it because they want to buy a sustainable made t-shirt and this is one of a few options available." **LH**

The need to appeal to a wider market was recognised, although most were unclear on how to go about this.

"It's a business, you need to appeal to the mass market or a wider consumer group than just people who are interested in sustainability." **NC**

"Our ideal consumer would be, right now someone who is quite happy to go into Primark and buy 20 things and maybe not even wear them all and then throw them in the bin. If we can get them as an Antiform consumer that would be absolutely ideal. But I think it would be great just to increase the diversity of the people coming to us. Whether that's their location or their background or age or ethnicity or whatever it is, that we can provide clothing that a greater number of people feel happy to wear. That would be my ideal." **LH**

Informants again recognised the 'values action gap' between expressed intentions and actual buying behaviour.

> *"And it is a very dangerous game asking someone if they want X and then explaining it to them completely because the answer they give you is completely hypothetical and really when you are present somebody with a product and they have got to spend their own money on it, will they still buy it? You find that when you do the research like that 50% of people, or however many people who have said 'yes' but actually no, they won't."* **CF**

> *"When you start thinking about circular economy thinking and cradle-to-cradle thinking it's not really the full story if the consumer is not changing their behaviour."* **LH**

> *"The things is about quite a lot of the market research stuff that you can do, is you ask people would you buy sustainable items, would you pay a little bit more for it and they always answer yes, yes, yes, but then in the actual moment of buying, they go into Topshop and if there is something cheaper they buy the cheaper thing. So it's like how can you... people when it comes to doing good, people say that they will, but the reality is something different."* **NC**

Although there were clear ideas on who the target was currently.

> *"I mean, we are very much a menswear brand and I would say that 80% of fair trade and organic products are bought by women, so we were kind of starting from a challenging place as it was."* **GL**

> *"Our main customers are around 25 to 40, they like the aesthetic, which is what draws them in but they are interested in the sustainability story, which we know because the majority of retailers are focused on retailing sustainable fashion so they have already walked into a shop like Here Today Here Tomorrow and they tend to be quite active on social media because we are in touch with them."* **LH**

10.4.1.2.7 Sub-theme: Media and communication

When asked about their views on the current communication of sustainable fashion to consumers from the mainstream media, most informants felt that although the mainstream press was covering the issue, it was still falling short.

"They talk a lot now about working conditions in India, Bangladesh, Africa and China and in Asia in general, but there's not really shown an alternative." **AN**

"I think they do a really crap job of it. The media does have a responsibility to inform us about these things, about what is going on and to really help drive behaviour change. Occasionally you will get someone like Vanessa Friedman (Fashion Director and Chief Fashion Critic at the New York Times) who will drop in something if it is glamorous enough but I think we need a lot more kind of support from media in general, from Elle Magazine down to Esquire or whatever they all need to be brought on board to help people understand what they can do, what they should be doing, and why. Why they should be acting. What are we trying to achieve by creating sustainability in the textile industry?" **CS**

"The fashion industry worked quite hard to create a public image that has got nothing to do with where the things come from. So to now go back and say to everyone, well actually you should care about where this comes from, it is a challenge because it is going against the very nature of what the industry was built on." **CF**

"And I think the media do very, very little, especially TV. There are so many life changing documentaries out there, I think they should be plastered all over the TV instead of all these reality shows that mean absolutely nothing." **GL**

"There is also, I still feel, a misunderstanding of what sustainable fashion, can, could, should and will look like. So I guess that is a question around how are sustainable brands communicating? What are the channels open to consumers at the moment." **LH**

10.4.1.2.8 Sub-theme: Integrating into the mainstream

For consumers to convert to buying ethical fashion, a requirement was expressed for it to be more integrated into current media and fashion coverage, instead of being singled out as a novel offering, distinct from all other types of fashion.

"But there needs to be a way for us to kind of talk and engage with people and say you know what, it's ok to not just spend your money buying new stuff all the time. It's ok to actually save money to buy a better jacket instead of going out and buying a trendy jacket. And for that we are looking at magazines, TV shows, we are looking at the things that people watch. Why aren't we talking

products that we know are better and putting them in front of people in the same sort of subversive way that people put Coke in front of us?" **CS**

"If you look in the current media; if The Guardian is going to run a story about sustainable fashion, it will be a sustainable fashion article, with only sustainable fashion clothing. You don't just get a Goodone piece put alongside a Chanel jacket in deep summer in Elle magazine. It doesn't happen, it's still so segregated." **LH**

10.4.1.3 Theme 3: Design and Production

10.4.1.3.1 Sub-theme: The Design brief

The design brief was felt to be the key opportunity for integrating sustainability into the whole design and production process, by setting the task of answering the question of how to produce sustainably, with the use phase in mind.

"At the beginning, with the design brief. For designers, from the moment they start it has to be one of the elements that they think of. If you don't have it there, it is quite hard to integrate it afterwards. It is possible, but as you go further down the line, it becomes harder and harder to integrate it, so having something at the design stage is really, really crucial to ensure that you can actually implement it and also collect the correct information about where you think your product is coming from and how you think they are made." **CS**

"This question of 'How do we do it?' is the fashion professional's design brief." **JM**

"*I think that's quite a difference that I see here, when I am teaching between fashion students and product design students. Because for product design students, it's written into the brief, it's so specific, and it's so much around thinking about user centred design, and whereas in fashion, we seem to be very slopping in doing that, not very clear about who it is and who the end... Well we don't really think about the item of clothing in the use phase, we think of it at a retail point. Whereas product designers, because they are designing for use, they are forced to think about it. They confront it earlier on in the development stage, whereas fashion designers aren't actually asked to do that."* **LH**

10.4.1.3.2 Sub-theme: Sourcing

60 references to sourcing were made on 13 occasions, indicating the importance of this stage in the supply chain for circular economy fashion. Sourcing for upcycled

design occurs near to the beginning of the whole design and production process, making best use of what materials are available at the time, and allowing this to inform and complement the design process.

> *"To reuse that is definitely the most environmentally friendly thing that you could do ever do to make new clothing."* **NC**

> *"In upcycling it is really hard. Because most of the time, when we go to buy fabrics, we cannot choose. We have to buy what we get. That's the thing with upcycling, that you have to just use what is there already."* **AN**

> ***"**So, obviously the sorting bit starts with the other shops. So they sort it into what they can't sell. But we get all the fabric, they don't actually sell fabric at their shops, so that's a great one. Then it comes to us and then it goes to the shop staff who sort in into fabric, clothing and stuff for sale, so if it's just completely not for us, or crazy costumes, or wedding dresses, we get lots of stuff like that. So then they go through the fabric side of it and it all gets sorted out."* **GC**

10.4.1.3.3 Sub-theme: Slow fashion

By departing from the traditional dictates of fashion seasons ethical and slow fashion can create enduring and regularly available pieces, gradually adapted and changed over time, rather than several new collections a year which are then set to become out of date by the next collection.

> *"We've actually dropped the season name, so we've got collection 8 going out at the moment, which will run for a year. It's not actually got a date on it, so it's not called Autumn Winter '14 and we have done that on purpose because we want to stop people thinking about clothes having that predetermined sell by date. It's just what we are producing at the moment. So I think it has to be design led to actually get onto the market but I think you can be very clever about what you do."* **LH**

> *"A lot of it is trans-seasonal, a lot of it will be the fabric that changes the season. And we just remove styles and introduce styles that might be ones we have already done, or adaptations."* **GC**

10.4.1.3.4 Sub-theme: Design

Designs created in upcycled design utilise the same traditional and creative processes as in regular fashion design, such as moodboards, toiles and design research and inspiration.

"With the design process, I'll start by going off and doing my research, all sorts of stuff like that, make some mood boards, then I'll come back. Me and Anna will have a design meeting to talk through that and discuss which ones we like best or what kind of avenue we think we should go down and what… We can't really here design like a whole new collection at once because it doesn't really fit into the production so we have to kind of do it bit by bit. We have a whole lot of stuff that will just be our staples, and will stay, and then some that comes out for winter some that comes out for summer. And then we will introduce new styles throughout the year as well. But so yes, I me and Anna will have that design meeting and chat things through and then I'll go away and kind of further that avenue that we have talked about and then I'll start working with pattern cutter on preparing a toile, a pattern obviously and a toile for a piece and then again Anna will come back and we'll look at the toile and see what we think kind of change that and then a couple of samples later. We tend to not work on it too much I think." ***GC***

"Some of them have a recycled fabric in them but it's not an actual upcycled from post-consumer. Some of them are 80% recycled, some of them have nothing, so it really depends upon the design." ***NC***

10.4.1.3.5 Sub-theme: Flexibility of design formula

A flexible design formula in upcycling allows for fabric substitutions to take into account the changeable nature of material supply.

"I think the strength we have is that the items can all be unique and that we get crazy fabric in, and we can make these amazing one off things. So it is kind of jumping on that, because we have gone for really straight, clean styles so that we can change season just with fabric rather than necessarily a whole different shape." **GC**

"I think you have to have panelling. Most of the pieces have panelling somewhere because we rarely get metres and metres and metres of stuff. So that makes it a lot easier. Especially to just have less waste when you are cutting as well. So we do that and then we also just add new panels in if we need to with the fabric. So we do that quite a lot when we are cutting. I think there is quite a bit of free reign that goes in the cutting too. I think. And then we kind of… from the clothing obviously with the waste, we then move down to accessories, so that goes into bags and back packs and purses. So we really do try not to waste." **GC**

10.4.1.3.6 Sub-theme: Sales and feedback

36 references to sales were made on 8 occasions and 16 references to customer feedback were made on 8 occasions, indicating the importance of these aspects of retail. Social media and in-store dialogue are key conduits for consumer feedback, as is repeat custom.

> ***"****So I think for us it's just having a shop. We just start getting direct feedback. We know customers like and what they don't like."* **AMH**
>
> *"But on the whole it is just knowing what sells well. That is the biggest indicator to us of what people like and what they want."* **JC**
>
> *"They keep on coming back. And that is the feedback… the feedback is about the fact that the clothes look beautiful and are beautifully made."* **OdC**
>
> *"We have a couple of regular customers, so that's why we know what they are looking for."* **ZV**
>
> ***"****So we do probably more customer feedback than most, well I don't know if we do actually, but we use online competitions to get the information. Which is really interesting. We do it through a software programme called Woobox which is like a competition plugin software which will go out through our social media and then bring all that information back to us... Interestingly we get a lot of people saying that they like the unique aesthetic of it and the fact that is it limited edition, which is inherently connected to the fact that it is upcycled, because if it wasn't upcycled then it wouldn't all be limited edition, so I think that is really interesting."* **LH**

10.4.1.3.7 Sub-theme: Selling upcycled clothing in charity shops

Difficulties of selling more highly priced upcycling garments in charity shops were discussed. Consumers would often be seeking low cost garments in a charity shop, and would not be prepared to buy the more expensive upcycled design items.

> *"People might look around and see something that they like in* TRAIDremade*, but then probably find a bargain for 15 quid and just buy the second-hand thing instead… it kind of needed its own shop…. but never could justify spending on it."* **CF**
>
> *"We always have the same discussions about it because for us as a charity, selling the upcycled garment under a really as such, unknown label TRAIDremade, in our shops for more money than the second hand Burberry*

coat that is second hand is a bit tricky. So you walk into the shop, there is a coat, its £180, unknown label, TRAIDremade. It's made in the UK. So what? It's made from recycled fabrics. So what? There is a Burberry coat, and its £60, and its second hand, and it looks in the same condition as this brand new one that is stood here. Which one are you going to go for?" **CD**

10.4.1.3.8 Sub-theme: Selling upcycled clothing in a dedicated shop

A more successful strategy was felt to be a dedicated upcycling and sustainable fashion shop, such as at the FARA Workshop or Here Today Here Tomorrow.

"It was always the idea to have a separate shop, so we complement the charity business, but we are a separate shop. It is quite important to them to have that I think, to stand out." **AC**

"As much as we want to be sitting alongside ethical shops, we want to be competing with fashion." **AC**

10.4.1.3.9 Sub-theme: Finding the right market for upcycled clothes

LH discussed the conflict between upcyclers using pre- and post-consumer textiles and questioned whether the lack of success of selling upcycled clothing made with post-consumer textiles was linked to the practice of selling into the wrong existing markets, and whether new markets needed to be created.

10.4.1.3.10 Sub-theme: UK and overseas markets – Germany

UK buyers were still behind those in overseas markets such as Germany in their understanding of the variability of upcycled stock.

On buyers: *"I think they are a lot more laid back about what they are going to get. My buyers in England are so neurotic about, 'when you say it's upcycled, when you say it's going to change a bit, but you sent me this batch and it's got a slightly, slightly, different shade of black cuff to last time'. I get a similar sized boutique in Germany and now I am so neurotic about saying, every time I send them a reorder, you know – 'this is going to have changed'. I get emails back saying 'You are the designer – send us what you think!' you know? 'You choose, you are the designer'. I think there is less of a neurosis about what they are going to get and maybe they are more accustomed to recycled fashion and upcycled fashion than buyers here. I mean I've had shops before, when I've tried to introduce the brand, who have said 'We do not take upcycled fashion'. I think there is a feeling that quality is going to be poor…"* **LH**

10.4.1.3.11 Sub-theme: Promotion

44 references to promotion as part of the sustainable fashion cycle were mentioned on 13 occasions. Once again, social media and in-store dialogue were thought to be key strategies for communication.

> ***"****The way we communicate with our consumers is through lots of different streams so really direct, face to face, in the shop, we do newsletters, we are on social media, we attend events, we give talks and presentations about various things. So there is lots of different ways that we are getting our message out there. But probably the main way that people can respond back to us is when they are here face to face, and those who are engaged enough to start those conversations on Twitter or on Facebook or something like that."* **JC**
>
> On promoting upcycled collections: *"But in terms of getting the press and everything it's a really good story to tell."* **CD**
>
> *"A lot of social media. I mean social media is so good for the charity. We invest a lot of money in that and the marketing side of it."* **AC**
>
> *"We have a PR agency and of course we have a list of 50 to 100 magazines. This is our press contact through the PR agency that we had to choose at the beginning and of course they are all normal mainstream fashion magazines. Really important. Because the eco magazines and bloggers, they come to us anyway, no? They know. But we have to reach the others."* **AN**
>
> **SH:** *"So you think [ecofashion] needs to be integrated into the mainstream rather than singled out as a novelty?"* **CS:** *"Oh yeah, it's the only way people will start to take it seriously. Because right now, if you are eco-friendly people think of you as a bit of a weirdo. Or a bit of a hippie, still."*
>
> *"You don't have to be too preachy about telling people where they get their clothes form but you can be honest about it, you know?"* **GL**
>
> *"There are more and more brands that are doing things, whether it's sourcing organic cotton or working fair trade, where that is not necessarily the first thing that they are talking about. It's about good design and it's about products that people actually really want, but then all that information is still there and they are doing those things but it doesn't necessarily have to be the first thing that a brand has to talk about."* **JC**

"If you were to produce upcycled garments on a mass scale, I think the key consideration in marketing would be the communication of the diversion of waste, only carefully worded so it didn't seem like you were getting your materials for free, but then charging a lot for the finished garment. A designer I know in Chile works with free fabric off cut donations from a local high end manufacturer. She pays nothing for her scraps, but instead uses the money she saves to pay fair wages and train disadvantaged women to sew for her. It's an effective trade-off I think. Especially as her garments tend to be more work intensive as she is working with small scraps of fabric." **SB**

10.4.1.3.12 Sub-theme: Production

59 references to production were made during 12 occasions by key informants. Production processes in upcycled fashion are characterised by their labour intensity, in which items often need to be repaired, unpicked, reworked, recut and panelled. This adds to the final cost to the consumer, often resulting in brands remaining small and niche. Efforts to scale up production and take advantage of economies of scale need to be backed up by initial finance and a secure market, both uncertain factors for small niche brands. This had led to a 'chicken and egg' problem of the need to scale up to grow the business, but not having the means to do so, being such a niche brand.

"Also we have this thing, sort of chicken and egg, where we have a small collection because we are not very well known and it's a risk etc. But then because you have a small collection all your production costs are really high but then if you want to produce more to get better prices, and then you produce too much, where are you going to sell it? And its risk again and you don't want to create waste, because you are about not creating waste, using waste. There is lots of discussions that go on and on and it's... Because we have a very good system and set up for the second hand clothing and it really works, the processing, the shops, it is very profitable. It's very hard when we do TRAIDremade. In comparison it's not as profitable for a lot of effort." **CD**

"And also TRAIDremade is a crumb in comparison to us selling second hand clothing, to put it in context! As you can see 20% goes to the shop, 0.5% goes to TRAIDremade and actually it is probably less that 0.5, but yeah, it's quite small but TRAIDremade is good in terms of press and things, it's very good for TRAID, because I don't know, it reaches a bigger audience. It brings people in and it's kind of got quite a story to tell, about waste and textile recycling and

upcycling and all the kind of things along the way, it's quite a good story to tell so it is good for the brand in that sense." **CD**

"It was chicken and egg because they could not put loads of money in to it, because it wasn't making any money, so they could not justify a big spend, but then without putting something in and just giving it to someone three days a week to run, they were only ever going to get quite a limited return on that." **CF**

"And the final collection that I did for them this winter, we put the prices all up, because we wanted to put more work into the clothes. Make them more amazing so that we could potentially wholesale them to higher-end boutiques and get them out of their stores. But in doing that made the manufacturing costs quite high. So then we put all the prices up." **CF**

"We dye it, we change the length, we do simple stuff like repairs, darning, things like that. Hemming, we do a lot of panelling in the knit wear, we do a lot of that, so we cut whole panels out and replace them with different fabric. The knitwear, you know you'll have three jumpers mixed together. There will be too many holes in one sleeve – cut it all off and replace it. So we make new sleeves stuff like that. The men's shirts are a big thing in the Reworked. We have a lot of men's shirts and it's all led by what is wrong with the product in the first place, but with men's shirts we tend to get damaged collars or stained sleeves. So we unpick the collars and the sleeves… We found with the shirts when we were doing them originally, we started doing the collars and sleeves because there was that much wrong with the shirt and that took longer than making the shirts from scratch so we now only do like one thing. We have to kind of pick." **GC**

"So you can go over and see, you can find out exactly who made your dress. A lot of people do that. I think it really works both ways. It is so nice for the makers to see someone walking out in something they have just made. It is really rewarding. I think that is really important for both of them, both sides." **GC**

"Once we have a style, I will go and pick fabric in the morning. I'll go home and pick the fabric for the stuff to be cut in the day and mark it all up. And then they will cut it all. It all gets cut into these little sample bags with a label on and then it will be grouped into colour and then be made, en masse." **GC**

"The way we do the Remade now, is slightly different in that we have guest designers. A brand called Percival, which is based in Soho. Their designer Olivia has designed a range with the support of Clare who you met at our warehouse. They have worked together on the fabrics we have got and then it is being produced, I think at the same factory that we used before in Tottenham and I think it is being launched in Autumn Winter in September. I've seen a few drawings, but I've not seen anything else apart from that! It going to be slightly different from before, because obviously we had a designer who was working with us 3 days a week and now we are working with a brand instead." **SK**

Giving designers the responsibility and agency to make decisions affecting production, labour and materials is key to implementing sustainable production in larger brands.

"I think giving people the tools to really go down to the factory level and make a difference and to start doing good things where they are designing. You design for recycle, design for disassembly at the beginning of a process. Giving people the power to make the changes that we want to see is only going to help to speed up these changes." **CS**

"And we have so many ideas that the larger brands and companies could already be putting into right now, really implementable ideas about how they could put in, even if it was 10% of a garment, but across a garment that they make thousands and thousands and thousands of every year... You want to take baby steps with a larger companies and do very small things like 5% or 10% recycled or something like that to make it easy and standardised and work within their system but once you started with that then you can go on to the next and maybe think about 15% or 20% or you know? Get their heads around it." **NC**

"Although the recycling of fibres is going to massive and very, very important and I think it is great in many, many ways – closed loop. Part of that closed-loop process should be a reuse element, because it takes so much energy and water and chemicals and to mulch down the fibres and remake them, and they are not as strong and all the rest of it." **NC**

"*At large scale much of the sustainable practices are through fabric choice, organic cotton, recycled PET (as in H&M Conscious Collection)… or through process changes (the elimination of sandblasting jeans by Armani).*" **SB**

"To produce upcycled designs at mass requires mass duplication of materials for the most part; otherwise you are always dealing with unique materials to make unique designs. It is likely best implemented with manufacturers who produce at a mass scale, so there is mass duplication of their waste." **SB**

"In the meantime I advocate ceasing production for all but a few very specific purposes, possibly footwear and underwear, and perhaps for certain health reasons, and of course this should be fashioned from fully renewable materials. Labour should be redirected to repair, refashioning, recovering waste textiles, all of them caring, labour intensive tasks." **JM**

10.4.1.3.13 Upcycling process model development

Building on a model developed from initial interviews during MSc research into upcycling in the UK womenswear industry (Han, 2012), designers were also for feedback on how faithfully this model represented their current design and production processes.

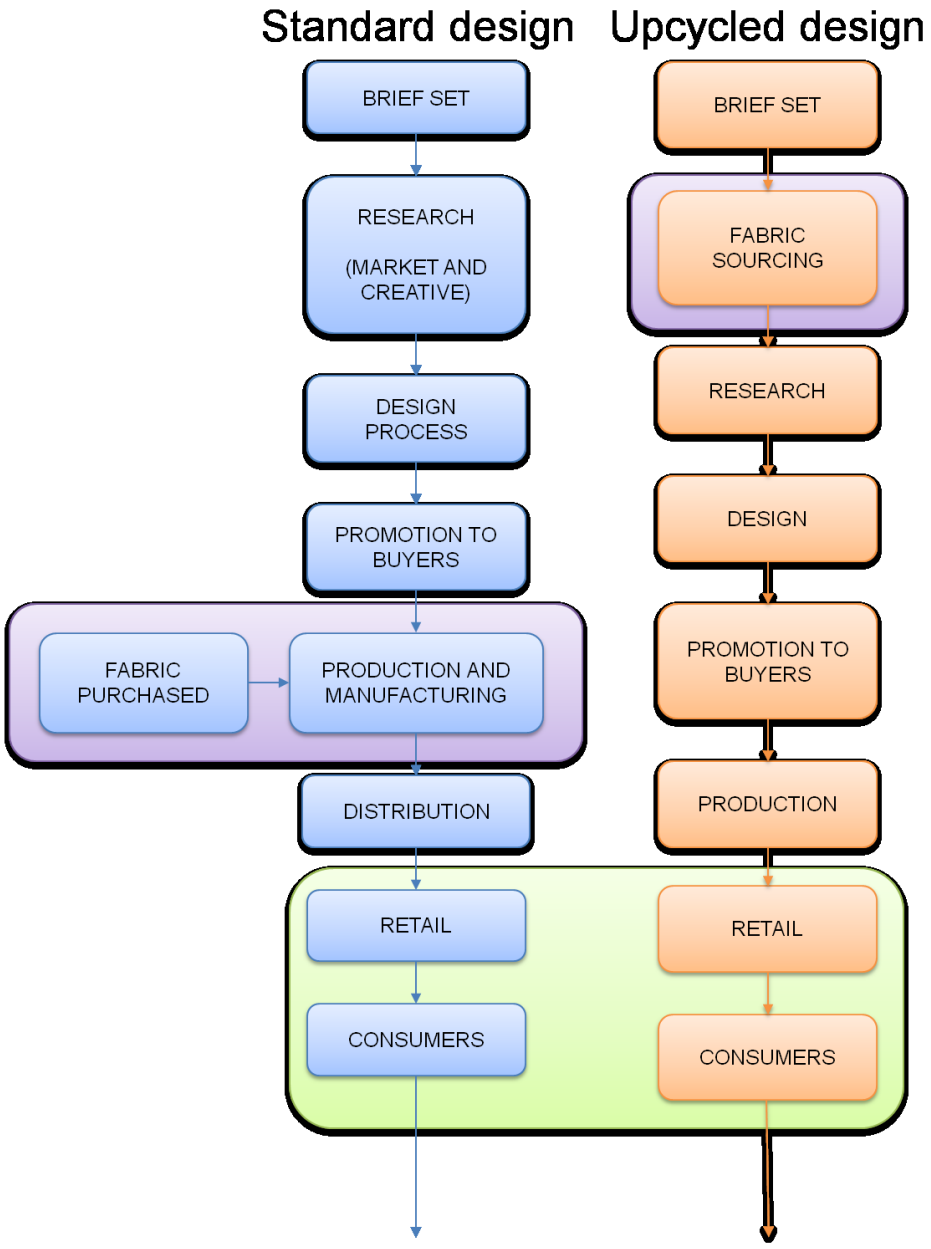


Figure 78. The initial 2012 comparative model

Feedback from designers was used to further refine this model, to create a true representation of the professional fashion upcycling process which could be used to inform scaling up the process for mainstream retail. The findings from this part of the study were graphically illustrated in a process model flow chart in the thesis, to allow for the analysis of the system.

Continuous sourcing

The feedback received from designers indicated that sourcing for upcycled fashion design runs continuously throughout the year, firstly informed by research and then feeding into creative research and the design process, followed by sourcing in greater volume once orders from buyers are placed and production is planned.

> *"When you are working with reclaimed materials often the sourcing runs continually alongside your work developing the range, depending whether you are using waste rolls or a lot of varied post-consumer stuff. And then goes on towards production where you will be sourcing at volume and probably all the time remaining open to new possibilities."* **CF**

> *"Plus sourcing on one chart looks like the same as it does on the other bit in fact it's a lot more time consuming and annoying so I think if it featured at multiple stages for upcycling would be a better representation."* **CF**

> *"I think the model is really interesting and quite accurate. My feeling is that there are some feedback loops which the model does not show. For us fabric sourcing runs continuously with research, design and buyers meetings constantly feeding into it. Overall it does represent the different approach."* **LH**

> *"I feel like the fabric sourcing / research / production is continuous throughout the year."* **GC**

Sourcing / fabric research

Research in where to source from differentiates upcycled fashion design from traditional fashion. Fabric sourcing research encompasses a major part of upcycled fashion business activities, and feeds into the loop of continuous sourcing. Decisions made on fabric sources affect all following stages of design and production for upcyclers.

> *"The only point I would slightly change is the "RESEARCH" one. In this case it might not be enough to indicate "Market and Creative", but the "Fabric research" should be also marked out. This is the big point in which the two systems are differentiating from each other. Traditional fashion labels go to dedicated fairs to get textile inspirations and sometimes to directly order the fabrics for their next collection, while the upcyclers research for pre-existing materials."* **AN**

"I think our fabric really affects our brief." **AC**

"Feedback for the diagram, I think it is more:

- *Research*
- *Fabric sourcing (some fabric buying)*
- *Research*
- *Design*
- *Promotion*
- *Remaining Fabric purchase*
- *Production"* **NC**

Production

A production technique used by upcyclers is to cut and bundle by individual garments, with pattern pieces cut from a variety of different fabrics, then bundled together into individual garment bags, to be sewn by one maker or machinist, in order to keep the right fabric combinations together. This style of production relates directly to the flexible design formula of simple, classic panelled styles, in which different sections and panels and be substituted for different fabric combinations depending on supply. This style of 'patchwork' pattern cutting also gives upcycled fashion it's unique and distinctive aesthetic.

"As an upcycler you have a lot of arranging of materials to do, allocation of limited quantity and quality control of what feeds into the factory, and often when I was making mass production of one off pieces in variety of fabric combinations we would cut and bundle up in single garment packs to go to the machinists... where commercial production just orders what cloth they need plus a small excess and the factory manage everything else." **CF**

"I'll go home and pick the fabric for the stuff to be cut in the day and mark it all up. And then they will cut it all. It all gets cut into these little sample bags with a label on and then it will be grouped into colour and then be made, en masse." **GC**

"The other thing to note is that in a factory which handles cutting and sewing you would have things broken down into small stages for efficiency but the bundled pre-cut styles we set up for TRAID for example would be made one

at a time by a single maker to try to keep the right combinations together and not get mixed up...

Even if they all have the same rib on a sweatshirt for example like I used to do, the rest of the garment has to be made up one at a time – that's where designing in the repetition/standardisation of black trim and other features becomes important... or using lining off the roll rather than by the remnant - just to make some of it run a bit smoother...

That's why to really scale the upcycling you need to try to design in space for variation if possible and then factory can potentially mix and match at will." **CF**

"And we just remove styles and introduce styles that might be ones we have already done, or adaptations. I think then it is manufacture and replenishing for a while. I suppose we are always going to be on going, because we have got such a fast response time we can do that here. So we can be like 'Oh those dresses are low, put them back into production!' It is kind of hard to plan a lot of it, you can plan a big bulk, but then you have to just react. See what people want." **GC**

10.4.1.4 Theme 4: The Fashion Industry and Sustainability

10.4.1.4.1 Sub-theme: Mainstream acceptance

"They start to talk about it a lot, and you can already see the customers, how much aware they are of the problems linked to fashion system but at the same time, somehow, this eco fashion is still not pushed enough." ***AN***

"It is about the price points, but you are not going to get the price points until you get mass acceptance of people using these things on a massive scale. But then there needs to the realisation that with these kids, with these people growing up, with all of us, when you actually start doing things properly and you start including all the externalities in the cost of doing business it is going to cost more money. The whole naiveté should disappear, this whole cheapness for cheapness sakes, that needs to go." ***CS***

"We need to be talking to designers, production people. We need to be showing people what the potential is. We need to demonstrate that this stuff is as desirable to the point where one day we are not even talking about sustainable fashion, we are just talking about unsustainable fashion. 'Why the

hell are you wearing that t-shirt – it is not even made in a nice factory.' That's what we want to be hearing." ***CS***

"So it is frustrating, when you've got these big designers, obviously a lot of them are trying to go green. I think most are trying to look like they are going green and ethical but, a lot of start-ups are making big efforts to choose ethical sourcing, which is great but it really needs the big boys to make a difference. And they will bang on and on about 'We are giving loads of jobs to all of these workers, without us they wouldn't have job.' That argument is bullshit. It doesn't wash whatsoever. For instance, I have been trying to sell to ASOS for years, and I've always come up against a brick wall with them saying 'Ethical menswear is not what our customers are after.' And I always say to them, 'You are opinion formers, you are one of the big players in the industry, what your customers will buy is what you tell them to buy.' You know? And it really is that plain and simple." ***GL***

10.4.1.4.2 Sub-theme: Dichotomy

"The fashion industry worked quite hard to create a public image that has got nothing to do with where the things come from. That is the business, that is what the business is. So to now go back and say to everyone, well actually you should care about where this comes from, it is a challenge because it is going against the very nature of what the industry was built on. I think. And it is an oxymoron you know. You can't push a product, that is by its very nature going to become obsolete, not even because it doesn't work but just because people want something new and the human nature and the drive and the desire to have new things is what is what's always fuelled fashion, for clothes and products and everything. So somewhere there has to be… I feel like it's finding its way of balancing between the two. But it is a challenge isn't it?" ***CF***

10.4.1.4.3 Sub-theme: Obsolescence

"But fashion as an industry; its own existence is very much 'this has worn out within 6 months because it's gone out of fashion' and then you want to wear something (new) next season." ***GL***

10.4.1.4.4 Sub-theme: Neoliberlism

All of these obstacles are part of the bigger overarching problem, the elephant in the room which is the system we live in, late capitalism, neoliberalism, it doesn't really matter how we label it. What does matter is to recognise it as the air we breathe, the water we swim in, to grasp how hard it is to imagine life

without it, to make the conceptual leap outside of its limits. Most of the resistance and change that we are performing, which is against something, is still within this system, it is still for neoliberalism. It reinforces the system. The most eco, ethical fashion does not threaten or disrupt the capitalist model, it feeds it." ***JM***

10.4.1.4.5 Sub-theme: Co-option

SH*: "Do you think it is possible for things like upcycling and mending to find a place within the mass production system that we have at the moment, to try and change things, or do you think it has to be a complete radical change?"*
JM*: "This is a really thorny question as well, because you are just straight away coming against the issue of co-option. As soon as mending becomes fashionable then, and this has already happened, then you can buy in the high street, something that has been produced with sweatshop labour, something that comes ready darned, which is nothing new because we have been wearing ripped jeans for ages, it's just one stage on from that. Taking mending at a representational level, rather than it being for the actual action of doing it, so I think that you are always going to get that."*

10.4.1.4.6 Sub-theme: Stopping production

"For me sustainable fashion means using up the extreme material excess we have created over the last several decades, be it as yarn, woven fibre, garment or shoddy, and only once we've worked our way through this huge arsenal of material, which is probably well beyond our own lifespans, should we start to think of producing anew, in an extremely more limited way, using purely renewable and sustainable fibres, be they natural or synthetic." ***JM***

10.4.1.5 Theme 5: Creating change

"Both as designers and consumers we need to think outside of consumerism, how to dismantle our dependence on it, how to create newness, how to create community." **JM**

"Sustainable design or sustainable fashion doesn't have an easy solution, or any solution." **JM**

"Everyone is battling with 'what can we do?' because the problem is far bigger than ourselves." **JM**

"If that's not then changing their attitudes and opinions towards textile waste and helping them to revalue their clothing, then to me, it has not really succeeded as a mechanism for sustainable design." **LH**

10.4.1.5.1 Sub-theme: Activism

"When we have such overabundance of stuff how can we justify making at all?" **JM**

"My underlying message today is to get perspective on our complicity in the current system so that all the best energies and visions of engaged fashion students and professionals can enact their radical intentions, draw power from being out of the system and take power out of the system itself." **JM**

10.4.1.5.2 Sub-theme: Mending

"I realised that those same skills, that same deep human desire to fashion by hand, could be put to use for mending instead." **JM**

"Mending is deeply radical. It is uniquely placed to dismantle capitalist systems of production as its very premise causes production to cease, and yet mending on a systemic level is not a quick fix, nor a solution that can be necessarily implemented just yet. I identify 4 main obstacles to mending from where we are now:

1. *Consumerism has made mending obsolete - it has been designed out of the fashion system*
2. *There is nothing to mend - because we hardly ever wear anything out*
3. *Fast fashion is not worth mending - because once it's gone out of fashion it's just subprime tat*
4. *There's no need to mend - because buying an alternative is still a far easier option*

There are many other obstacles, such as never having time in the neoliberal system, not to mention issues of psychology and fashion, and the co-option of mending by capitalism. **JM**

10.4.1.5.3 Sub-theme: Engagement and workshops

"We kind of have three basic workshops. So – basic sewing skills, so for people who haven't learnt on a machine before. And then we have rework your own wardrobe, so that's actually teaching people how to do it themselves. Which we think is really important to educate people as well. And then we have embroidery, so how you can embellish your own wardrobe. And then we

will be getting outside people to come in, and that is something I really want to develop. We have a London craft club coming in and doing their workshop here, so using our space, because we've got a really good space, and we want to try and connect to more people because I think it's a really important way of spreading the word." **AC**

"The Remade in Leeds community clothes swap which Antiform run as their social enterprise has around 900 members, 500 of which are active members, of which around 200 attend each swap, with around 2500 items swapped in the last 2 ½ years." **LH**

10.4.1.5.4 Sub-theme: Education

There were 16 references to education on 12 occasions, indicating that key informants viewed education as a key approach to instigating change.

"I think education is a powerful tool. It is making a major difference at the Bachelors and Masters level in countries like the UK, who have implemented components of sustainability into their entire curriculum. I do think that education in sciences at the high school level and the impact and ramifications of global warming, should be taught, along with how we impact that system." **SB**

"I have just done a 6 month youth project and a lot of them did appreciate the time that goes into making clothes, but a lot of them are like, I am just going to make my own clothes now because I can make it to how I want it. Which I think is a great. I would like to think that people appreciate what goes on with clothes but I don't know if they do. I really don't." **SK**

"We do lots of classes. Our Education (section) has sort of two strains. One is a lot more theory based, doing sort of group discussions and talks. And then the other one is more practical, also teaching people who bring their clothes to us, we show them how to fix, mend, alter, upcycle them. They are all free. We want everyone to be able to do it. With our education, we tend to work with other organisations. So I wouldn't teach in here (Remade studio) because it is too small. So quite often schools and universities will invite us in and we do a lot of work with local authorities, so they might say, we really like your education programme, can you do some education in our borough and we do it if we have go banks in that area, if we've got a shop in that area." **SK**

10.4.1.5.5 Sub-theme: Discarding

26 references to discarding and waste were made the key informants on 12 occasions. Problems of increasing waste were viewed as being directly connected to levels of consumerism, and while upcycling may be working to divert some of this waste, it was recognised that it is only ever a transitory solution, temporarily diverting waste from the linear model, after which an upcycled product may well end up as waste in landfill once more.

> *"Landfill is just obscene, you know? An area the size of the Royal Albert Hall gets filled up with landfill every two hours and it is not sustainable. So along with population, I think people really need to try and buy better quality products and buy less of them."* **GL**

> *"Because if you are thinking about a linear model of consumption that we find ourselves in, upcycling is essentially a slight deviation, and then that product could end up being bought by a customer who doesn't really understand the value of it, and it itself could end up being worn twice and thrown in the bin."* **LH**

10.4.1.5.6 Sub-theme: Guilt

The task of creating change and converting the way individuals think about consumption is balanced very finely between communicating the right message and going too far, making individuals feel judges and guilty for their behaviour.

> *"People don't want to be made to feel guilty so it's really difficult. We try and do it in a really... We dangle the sewing carrot and a lot of our education work in schools so they are kind of forced to listen to us."* **SK**

> *"You can start asking 'Are you aware of this, are you aware of how much textiles are discarded every year etc.' Then you can ask these questions but it is sometimes really hard when the consumer is not interested at all then you cannot directly ask such questions. They feel attacked also. Like if you were to make them feel guilty for what they wear, which is not the thing that we want!"* **AN**

> *"I don't know what it is about our psyche or our... But it is all of us, I think we're kind of affected by this feeling of wanting more. When you are working to try and counteract that then you deal with the guilt!"* **JC**

10.4.1.5.7 Sub-theme: Understanding

34 references on 13 occasions were made to public understanding of the issues circular economy fashion strategies are trying to address. Individual's understanding of consumption and waste patterns and sustainable fashion offerings have altered greatly in the last few decades, partly due to the increased availability of information through the internet. Whether this increased understanding is affecting real behaviour change is still uncertain.

> *"But 15 years ago, 10 years ago, perceptions were very different, and now fair trade is a positive buzz word for a lot of customers, but still a lot of people will still associate it with, particularly hemp, associate it with hippies, unwashed crusties, and it's still got a bit of a bad stigma attached to it. But no, I think that is very much changing and people are kind of looking for positives now. Because information is so much easier to get, you know? People now are becoming more aware. Whether or not they are acting on it, but at least they know."* **GL**

> *"So I think it's about understanding how your consumers are acquiring and disposing of clothing so that you can actually make a change that's systemic and fundamental than just - you have taken some old t-shirts, you've made a dress out of it, you've given it to a new consumer, but where does that actually lead?"* **LH**

10.4.1.5.8 Sub-theme: Research

Several of the designers, from Upcycling Fashion Store / ALUC, Antiform and Here Today Here Tomorrow, were also involved with academic research projects, looking into sustainability in the fashion industry.

10.4.1.5.9 Sub-theme: Charity

AN is also involved in a project to upcycle post-consumer waste with a charity called Stadt Mission in Berlin. The charity handles around 2 tonnes of clothing per month. Twice a week Arianna visit the charity to sort through items and pick out textiles which match up with designer requests or needs. The charity have set up this resource for upcyclers, as well as setting up an atelier with machines and equipment. Employment opportunities are created for the designer within Stadt Mission, although not specifically as designers. The charity have set up an upcycling brand called Water to Wine, which has proved very successful so far with Berlin consumers, who are typically enthusiastic and understanding of the nature of upcycled clothing.

10.4.1.5.10 Sub-theme: Consumer perception of charity shops

Individual's perception of charity shops as undesirable places to shop is still a problematic area of for those promoting sustainability.

> *"You know, there's connotation for all of those different words and I think there is something quite interesting in that. I did a really short survey where I just went out and I spoke to students and I asked – do they give clothes to charity, and they all said yes – do you shop at charity shops, they all said no. And I said would you go to a clothes swap? And most of them said yes. And the ones that had said yes – no – yes, I sort of said, but if your clothes that you don't fit into anymore go to charity would you not think that maybe your neighbour's clothes would be there and wouldn't you think you would find something. And they said 'Oh no they are awful, I don't like going in them."* **LH**

> *"Yeah, you know, someone said to me, I had an argument with him, I had quite an interesting discussion with this guy a couple of weeks ago, I was doing this summer fair and he said to me 'I give my clothes to Oxfam, I didn't realise that TRAID was a charity.' I was like, really, Ok, that's interesting. Why do you think that?' 'Well you don't really have any pictures up in your shops that imply that you are a charity' and I was just like, that's not why people buy from TRAID. It would be nice if that was the reason, but people don't buy from TRAID because we are a charity. What, should we have pictures of sad children to make you have to buy things?"* **SK**

10.4.1.5.11 Sub-theme: Giving designers more agency

As highlighted in 'Theme 3: Design and production', giving designers the agency to make decisions affecting production, labour and materials is key to implementing sustainable production.

> *"I think what we have right now, this is something I am trying to address in my current job, there is a really, really big gap between corporate responsibility and fashion and the rest of the company for example. So one of the things that we are trying to do is to educate people in your company to behave in a way that is consistent, that helps to take the business forward, while also trying to deal with the margins of the production runs of the factories... and they don't get educated about it. They pretty much get told, you have to do this and you have to do that, but no one tells them how and no one tells them why. Giving people the power to make the changes that we want to see is only going to help to speed up these changes."* **CS**

"And I think giving people the tools to really go down to the factory level and make a difference and to start doing good things where they are designing. You design for recycle, design for disassembly at the beginning of a process." **CS**

10.4.1.5.12 Sub-theme: Highlighting bad practice

Highlighting and penalising those producing in through unsound practices would strengthen the offerings of sustainable fashion brands, enabling them to compete on price and offer consumers more desirable products.

"We need to demonstrate that this stuff is as desirable to the point where one day we are not even talking about sustainable fashion, we are just talking about unsustainable fashion. 'Why the hell are you wearing that t-shirt – it is not even made in a nice factory.' That's what we want to be hearing." **CS**

"Tax those that don't act ethically and ecologically to put a financial cost on their hidden abuses, bringing their costs up to the ethically produced garments." **SB**

10.4.1.5.13 Sub-theme: Questioning the accusatory stance

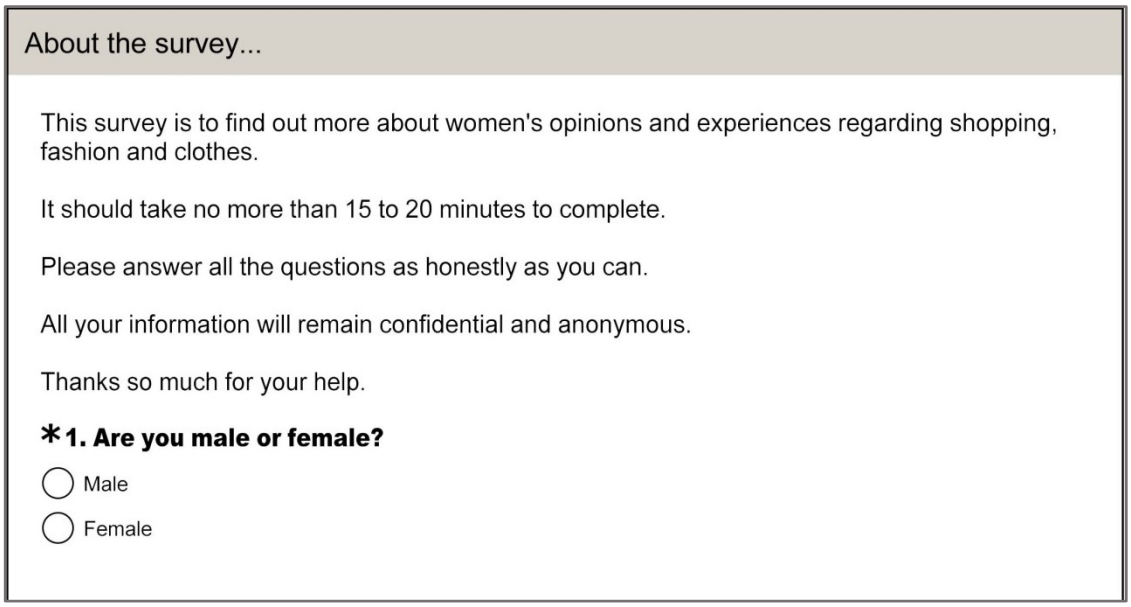
An ideal sustainable fashion situation would be for ethical practice to be the norm, and in which accusation of poor practice would not need to be brought into the spotlight. This is of course very far from the current situation.

"The trouble for me is that, using alternative chemistry to what people use as DWR finishes and so to explain what I am doing differently means that you really have to explain what is wrong about Gore-tex, or what is wrong about other people's fabrics. And then that gets you into a whole world of finger pointing and negativity which I don't think is good." **CF**

"Are we aiming that all the products in the market have reached a point of sustainability, that you can buy confidently, that you can buy sustainable and you don't need to talk about it. But I don't think we are quite at that point yet? It is a very, very long way away." **LH**

10.5 Appendix E Consumer Survey

10.5.1 Online Survey Questionnaire



About the survey...

This survey is to find out more about women's opinions and experiences regarding shopping, fashion and clothes.

It should take no more than 15 to 20 minutes to complete.

Please answer all the questions as honestly as you can.

All your information will remain confidential and anonymous.

Thanks so much for your help.

***1. Are you male or female?**

◯ Male

◯ Female

Shopping habits...

***2. Where do you prefer to shop? Please select as many as you like.**

- [ ] On the high street
- [ ] Department stores
- [ ] Vintage shops
- [ ] At the supermarket
- [ ] Out of town shopping centres
- [ ] Designer boutiques
- [ ] Online
- [ ] Specialist shops
- [ ] Independent shops
- [ ] Local markets
- [ ] Charity shops
- [ ] Other (please specify)

3. Please list the 3 shops you most regularly buy clothes from...

1.
2.
3.

***4. Roughly how often do you shop for clothes?**

- ◯ More than once a week
- ◯ Once a week
- ◯ 2-3 times a month
- ◯ Once a month
- ◯ Once every 3 months
- ◯ Once every 6 months
- ◯ Once a year
- ◯ Less than once a year
- ◯ Not at all

Other (please specify)

Shopping habits...

***5. When I am shopping for clothes...**

	Always	Often	Sometimes	Not really	Never
If something takes my fancy, I buy it.	◯	◯	◯	◯	◯
I see clothes as an investment and like to spend a bit more on things.	◯	◯	◯	◯	◯
I have a style and I stick to it.	◯	◯	◯	◯	◯
I tend to buy the cheapest clothes.	◯	◯	◯	◯	◯
I look for a label to prove that the garment was made ethically.	◯	◯	◯	◯	◯
I seek out shops that stock ethical clothing.	◯	◯	◯	◯	◯
I am keen to try new brands and designs.	◯	◯	◯	◯	◯

Other (please specify)

Shopping habits...

***6. When I am shopping for clothes I am looking for...**

	Always	Often	Sometimes	Not really	Never
Brands I know and like	◯	◯	◯	◯	◯
Clothes I've seen in a magazine	◯	◯	◯	◯	◯
Vintage clothing	◯	◯	◯	◯	◯
Fashion items to rent that I can't afford or don't need all the time	◯	◯	◯	◯	◯
Organic clothing	◯	◯	◯	◯	◯
Upcycled clothes made from reused textiles	◯	◯	◯	◯	◯
On trend items	◯	◯	◯	◯	◯
Fair trade clothing	◯	◯	◯	◯	◯
Ecofashion	◯	◯	◯	◯	◯
Reduced / sale items	◯	◯	◯	◯	◯
Made in the UK clothing	◯	◯	◯	◯	◯
Versatile items that go with everything	◯	◯	◯	◯	◯
Clothes that have been seen on a celebrity	◯	◯	◯	◯	◯
Designer ranges from high street brands	◯	◯	◯	◯	◯
Second hand clothes	◯	◯	◯	◯	◯
Celebrity ranges	◯	◯	◯	◯	◯
Clothes that are similar to what my friends are wearing	◯	◯	◯	◯	◯
Clothes made from recycled fabric	◯	◯	◯	◯	◯
Clothes that are similar to what I already own	◯	◯	◯	◯	◯

Other (please specify)

Shopping habits...

***7. How does buying clothes make you feel?**

	Always	Often	Sometimes	Not really	Never
Guilty and a bit broke	◯	◯	◯	◯	◯
Happier with the selection in my wardrobe	◯	◯	◯	◯	◯
Like I am keeping up with the latest trends	◯	◯	◯	◯	◯
Like I want to show off my new things	◯	◯	◯	◯	◯
Like I want even more stuff	◯	◯	◯	◯	◯
Like I am prepared for more occasions	◯	◯	◯	◯	◯
Great, it is a reward	◯	◯	◯	◯	◯

Other (please specify)

***8. To what extent do you agree with the following statements?**

	Always	Often	Sometimes	Not really	Never
I like to get style ideas from glossy fashion magazines and websites	◯	◯	◯	◯	◯
I like to keep up with the latest trends	◯	◯	◯	◯	◯
I find advertising a bit much, it's everywhere	◯	◯	◯	◯	◯
I enjoy browsing in shops	◯	◯	◯	◯	◯
I like to fit in with my friends' style	◯	◯	◯	◯	◯
I like to think through a purchase and come back	◯	◯	◯	◯	◯
I am an impulsive shopper	◯	◯	◯	◯	◯
I don't pay that much attention to fashion advertising	◯	◯	◯	◯	◯
I shop for leisure	◯	◯	◯	◯	◯

Wardrobe habits...

***9. Have you ever been to a clothes swap?**

- ◯ Yes and I would go back
- ◯ Yes, but I wouldn't go again
- ◯ No, but I would like to
- ◯ No, it's not for me
- ◯ No, I don't know what a clothes swap is
- ◯ Other (please specify)

Wardrobe habits...

***10. When my clothes wear out or break I...**

	Always	Often	Sometimes	Not really	Never
Store them until I can deal with them	◯	◯	◯	◯	◯
Get them repaired	◯	◯	◯	◯	◯
Take the old clothes to the charity shop	◯	◯	◯	◯	◯
Put the old clothes in a textile bank	◯	◯	◯	◯	◯
Replace them with new clothes	◯	◯	◯	◯	◯
Throw the old clothes in the bin	◯	◯	◯	◯	◯
Customise, mend or alter them	◯	◯	◯	◯	◯
Leave them like that	◯	◯	◯	◯	◯

Other (please specify)

***11. When I am bored of my clothes, they don't fit or I don't like them anymore, I...**

	Always	Often	Sometimes	Not really	Never
Leave them in the wardrobe	◯	◯	◯	◯	◯
Get them altered	◯	◯	◯	◯	◯
Give them to friends or family	◯	◯	◯	◯	◯
Customise, mend or alter them	◯	◯	◯	◯	◯
Swap them at a clothes swap	◯	◯	◯	◯	◯
Sell them online	◯	◯	◯	◯	◯
Throw them in the bin	◯	◯	◯	◯	◯
Put them in a textile bank	◯	◯	◯	◯	◯
Store them in the loft / garage / under the bed etc.	◯	◯	◯	◯	◯
Take the them to the charity shop	◯	◯	◯	◯	◯
Replace them with new clothes	◯	◯	◯	◯	◯

Other (please specify)

Wardrobe habits...

***12. What do you currently do with...**

	Store them in the loft / garage etc	Recycle them at home as rags / dusters etc	Bin	Recycling bank	Household recycling	Charity shop	Give to friends and family	Sell online	Cash for Clothes shop	High Street take back scheme
Clothes that are completely worn out?	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Clothes that you are bored of?	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Clothes that do not fit anymore?	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯
Socks and underwear that are worn out?	◯	◯	◯	◯	◯	◯	◯	◯	◯	◯

Other (please specify)

13. For your clothes and textiles that end up in the bin, is this because...

- ☐ It is the easiest option
- ☐ I never put clothes and textiles in the bin
- ☐ They are too worn / dirty to be recycled
- ☐ They would not be worth anything in the charity shop
- ☐ I don't know what else to do with them
- ☐ I don't want anyone else to have to deal with them

Other (please specify)

Wardrobe habits...

***14. If you have taken clothes to a charity shop or textile bank, how long did it take you to get there?**

- ◯ 2 minutes
- ◯ 10 minutes
- ◯ 30 minutes
- ◯ More than 40 minutes
- ◯ I never do this

***15. Did you find it convenient to get to the textile bank or charity shop?**

- ◯ Yes
- ◯ No

Your outlook on shopping and fashion...

***16. How would you describe your own personal style?**

	Always	Often	Sometimes	Not really	Never
I like to wear things that are a bit alternative	◯	◯	◯	◯	◯
I need my clothes to reflect my active lifestyle	◯	◯	◯	◯	◯
I need to be comfortable in what I am wearing	◯	◯	◯	◯	◯
I like to have fun with fashion and clothing	◯	◯	◯	◯	◯
I like to dress in a smart and business like way	◯	◯	◯	◯	◯
I want to feel unique and stand out	◯	◯	◯	◯	◯
I prefer to blend in to the background	◯	◯	◯	◯	◯
Being stylish and on trend is important to me	◯	◯	◯	◯	◯
I like to dress in a casual and relaxed way	◯	◯	◯	◯	◯
I just want to fit in with others around me	◯	◯	◯	◯	◯

Other (please specify)

Your outlook on shopping and fashion...

***17. Would you describe yourself as any of the following?**

	Always	Often	Sometimes	Not really	Never
Fashionable	○	○	○	○	○
Impulsive	○	○	○	○	○
Stylish	○	○	○	○	○
Sociable	○	○	○	○	○
Frugal	○	○	○	○	○
Impressionable	○	○	○	○	○
On trend	○	○	○	○	○
Responsible	○	○	○	○	○
Nostalgic	○	○	○	○	○
Knowledgeable	○	○	○	○	○
Creative	○	○	○	○	○
A bargain hunter	○	○	○	○	○
Classic	○	○	○	○	○
Eco-conscious	○	○	○	○	○

Other (please specify)

Your outlook on shopping and fashion...

***18. Where do you find information on clothes, fashion and shopping?**

- [ ] Magazines and newspapers
- [ ] Retail, brand or fashion websites
- [ ] Social media and blogs
- [ ] TV Programmes and adverts
- [ ] Email newsletters from fashion brands
- [ ] Talking with family and friends
- [ ] Shopping with friends or family
- [ ] Other (please specify)

***19. Where do you find information on what to do with your old clothes?**

- [ ] TV programmes and adverts
- [ ] Websites
- [ ] Clothes shops
- [ ] Flyers through the door
- [ ] Magazines and newspapers
- [ ] Talking with friends and family
- [ ] From what I learnt at home, growing up
- [ ] From what I learnt at school / college / university
- [ ] From my workplace
- [ ] Other (please specify)

Your outlook on shopping and fashion...

***20. To what extent do you agree with the following statements?**

	Not really	Never	Sometimes	Often	Always
Ethical and environmental issues are important to me	◯	◯	◯	◯	◯
I would buy ethical fashion if the style and price were right for me	◯	◯	◯	◯	◯
I use reuseable shopping bags whenever I can	◯	◯	◯	◯	◯
I have purchased clothing because of the ethics of the brand making it	◯	◯	◯	◯	◯

Other (please specify)

Your outlook on shopping and fashion...

***21. Please rank who you think should take the most responsibility for making ethical and environmental choices in fashion (5 = most responsible, 1 = least responsible)**

☐	Customers
☐	The government
☐	Factories and employers
☐	Fashion designers, retailers, brands and shops
☐	The media

Demographic info...

***22. What is your age?**

- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ 65+

Other (please specify)

***23. What is your highest level of educational attainment?**

- ◯ No formal schooling
- ◯ Primary school
- ◯ Secondary school
- ◯ Sixth form college
- ◯ University graduate
- ◯ University post-graduate

Other (please specify)

Demographic info...

***24. What is your ethnicity?**

- ◯ White
- ◯ Black
- ◯ Asian
- ◯ Chinese
- ◯ Arab

Other (please specify)

***25. In what country do you currently reside?**

- ◯ Australia
- ◯ Canada
- ◯ Germany
- ◯ India
- ◯ United States
- ◯ Japan
- ◯ China
- ◯ South Africa
- ◯ United Kingdom
- ◯ France
- ◯ Mexico
- ◯ Spain
- ◯ Other (please specify)

Demographic info...

***26. What is your approximate average household income?**

- ◯ Under £10,000
- ◯ £10,000 to £20,000
- ◯ £20,000 to £30,000
- ◯ £30,000 to £50,000
- ◯ £50,000 to £70,000
- ◯ £70,000 to £100,000
- ◯ £100,000 upwards

Other (please specify)

***27. Which of the following categories best describes your employment status?**

- ◯ Employed, working full-time
- ◯ Employed, working part-time
- ◯ Not employed, looking for work
- ◯ Not employed, NOT looking for work
- ◯ Self employed
- ◯ Retired
- ◯ Disabled, not able to work
- ◯ In education or training
- ◯ Other (please specify)

***28. What is your occupation?**

- ◯ Accountancy, banking and finance
- ◯ Advertising, marketing and PR
- ◯ Animal and plant resources
- ◯ Apprentice
- ◯ Business, consulting and management
- ◯ Charity and voluntary work
- ◯ Creative arts and design
- ◯ Education
- ◯ Energy and utilities
- ◯ Engineering, manufacturing and production
- ◯ Environment
- ◯ Healthcare
- ◯ Hospitality and events management
- ◯ Human resources and employment
- ◯ Information research and analysis
- ◯ Information technology
- ◯ Insurance and pensions
- ◯ Law
- ◯ Law enforcement and protection
- ◯ Leisure, sport and tourism
- ◯ Media and broadcasting
- ◯ Performing arts
- ◯ Property and construction
- ◯ Public services and administration
- ◯ Publishing and journalism
- ◯ Retailing, buying and selling
- ◯ Scientific services
- ◯ Social care and guidance work
- ◯ Student
- ◯ Transport, logistics and distribution

Other (please specify)

Demographic info...

29. Which of the following best describes your current relationship status?

- ◯ Married
- ◯ Widowed
- ◯ Divorced
- ◯ Separated
- ◯ In a domestic partnership or civil union
- ◯ Single, but cohabiting with a significant other
- ◯ Single, never married
- ◯ Other (please specify)

30. Do you have any children under 18 living at home with you?

- ◯ Yes
- ◯ No

Other (please specify)

And finally...

31. If you would be happy to share your views about fashion and shopping in some small, fun and informal focus groups please leave your contact details below....

Refreshments will be provided!

Name	
Email address	
Phone number	
Postcode	

Thank you!

Thank you so much for your help in this research into improving fashion, shopping and clothing for everyone around the world.

Your help was most gratefully received!

If you would like to know anymore about this survey or fashion research at Manchester Metropolitan University, please get in touch with me at sara.l.han2@stu.mmu.ac.uk.

10.5.2 Demographic Statistics

Table 23. Demographic Statistics

Age	**N**		**Education**	**N**	
18 to 24	70	19.8%	Secondary school	17	4.8%
25 to 34	143	40.5%	Sixth form college	55	15.6%
35 to 44	57	16.1%	University graduate	126	35.7%
45 to 54	42	11.9%	University post-graduate	155	43.9%
55 to 64	32	9.1%	Total	353	100%
65 plus	9	2.5%			
	353	100%			
Ethnicity	**N**		**Occupation**	**N**	
White	322	91.2%	Student	67	19%
Mixed or dual	11	3.1%	Education	63	17.8%
Asian	9	2.5%	Creative arts and design	52	14.7%
Black	4	1.1%	Public services and administration	23	6.5%
Arab	3	0.8%	Charity and voluntary work	18	5.1%
Chinese	1	0.3%	Health care	17	4.8%
Latino	1	0.3%	Retailing, buying and selling	14	4%
Total	351	99.4%	Environment	11	3.1%
			Hospitality and events	11	3.1%
Country of	**N**		Accountancy, banking and finance	10	2.8%
United Kingdom	310	87.8%	Advertising, marketing and PR	10	2.8%
Germany	9	2.5%	Leisure, sport and tourism	8	2.3%
Spain	6	1.7%	Social care and guidance work	8	2.3%
Belgium	4	1.1%	Property and construction	7	2%
Ireland	4	1.1%	Information technology	5	1.4%
Australia	3	0.8%	Engineering, manufacturing and	4	1.1%
Malaysia	3	0.8%	Performing arts	4	1.1%
Canada	2	0.6%	Scientific services	4	1.1%
Lithuania	2	0.6%	Media and broadcasting	3	0.8%
United States	2	0.6%	Publishing and journalism	3	0.8%
Brazil	1	0.3%	Business, consulting and	2	0.6%
Cuba	1	0.3%	Human resources and	2	0.6%
Greece	1	0.3%	Information research and analysis	2	0.6%
India	1	0.3%	Transport, logistics and	2	0.6%
Norway	1	0.3%	Energy and utilities	1	0.3%
%Russia	1	0.3%	Total	351	99.4%
Switzerland	1	0.3%			
Other	1	0.3%			
Total	353	100%			

Table 24. Demographic Statistics (continued)

Employment status	**N**	
Employed, working full-time	137	38.8%
Employed, working part-time	61	17.3%
Not employed, looking for work	13	3.7%
Not employed, NOT looking for work	6	1.7%
Self employed	49	13.9%
Retired	8	2.3%
Disabled, not able to work	1	0.3%
In education or training	64	18.1%
Other	14	4%
Total	353	100%
Household Income	**N**	
Under £10,000 per year	57	16.1%
£10,000 to £20,000 per year	69	19.5%
£20,000 to £30,000 per year	58	16.4%
£30,000 to £50,000 per year	78	22.1%
£50,000 to £70,000 per year	47	13.3%
£70,000 to £100,000 per year	26	7.4%
£100,000 per year and upwards	13	3.7%
Total	348	98.6%
Relationship Status	**N**	
Single	113	32%
Married	101	28.6%
Cohabiting	78	22.1%
Civil partnership	30	8.5%
Divorced	14	4%
Other	11	3.1%
Separated	5	1.4%
Widowed	1	0.3%
Total	353	100%
Children under 18 at home		
Yes	79	22.4%
No	270	76.5%
Other	1	0.3%
Total	350	99.2%

10.5.3 Demographic Graphs and Charts

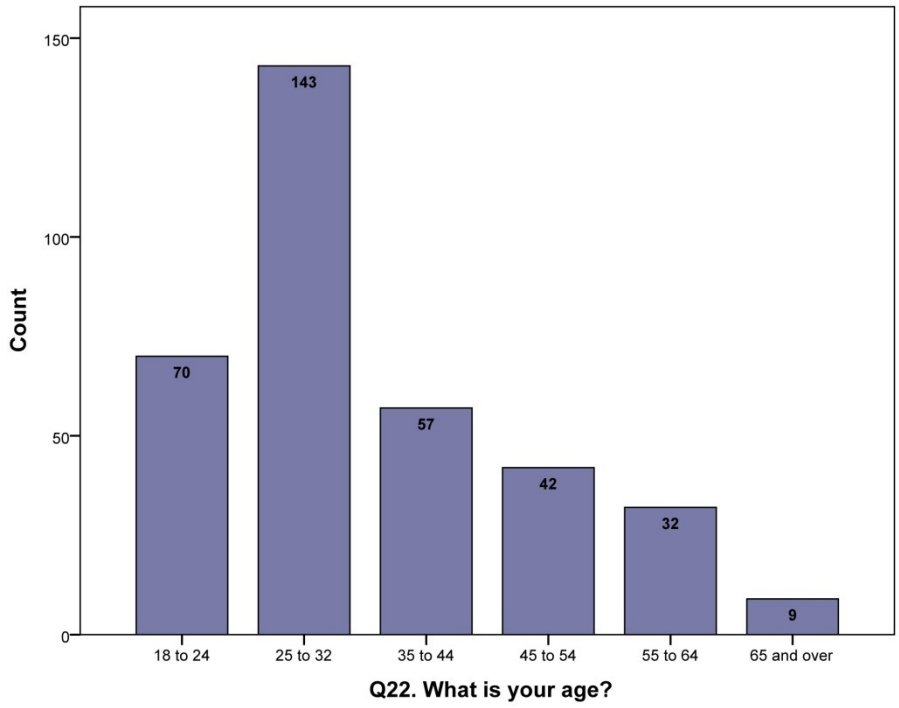


Figure 79. Q22. What is your age?

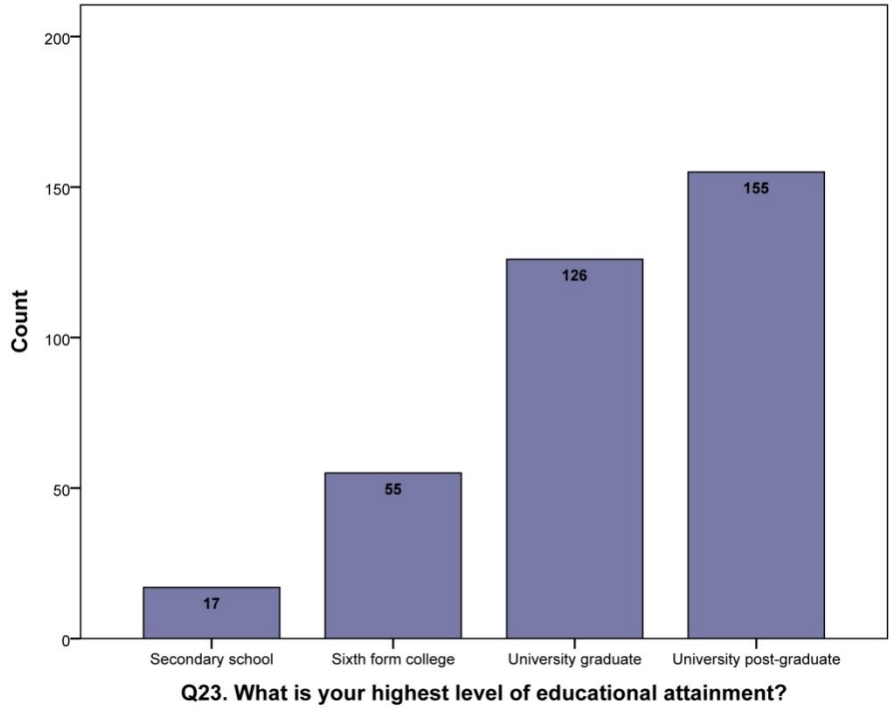


Figure 80. Q23. What is your highest level of educational attainment?

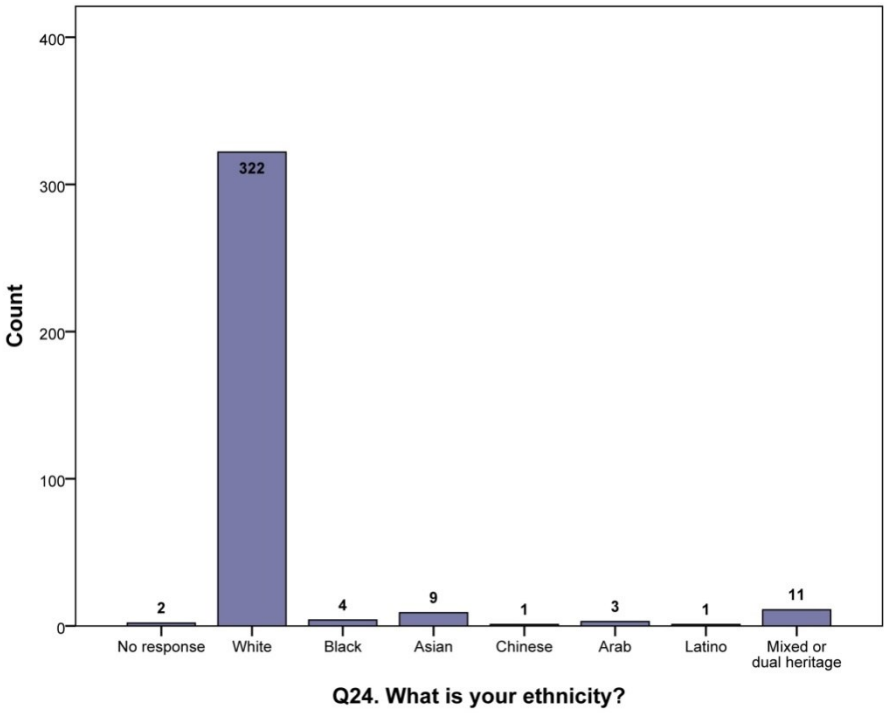


Figure 81. Q24. What is your ethnicity?

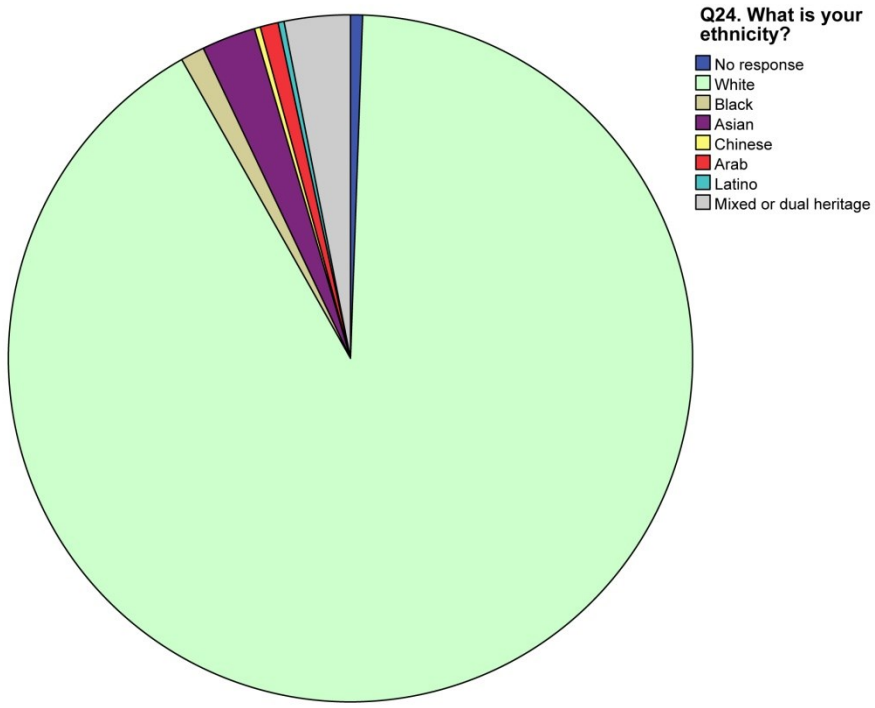


Figure 82. Q24. What is your ethnicity?

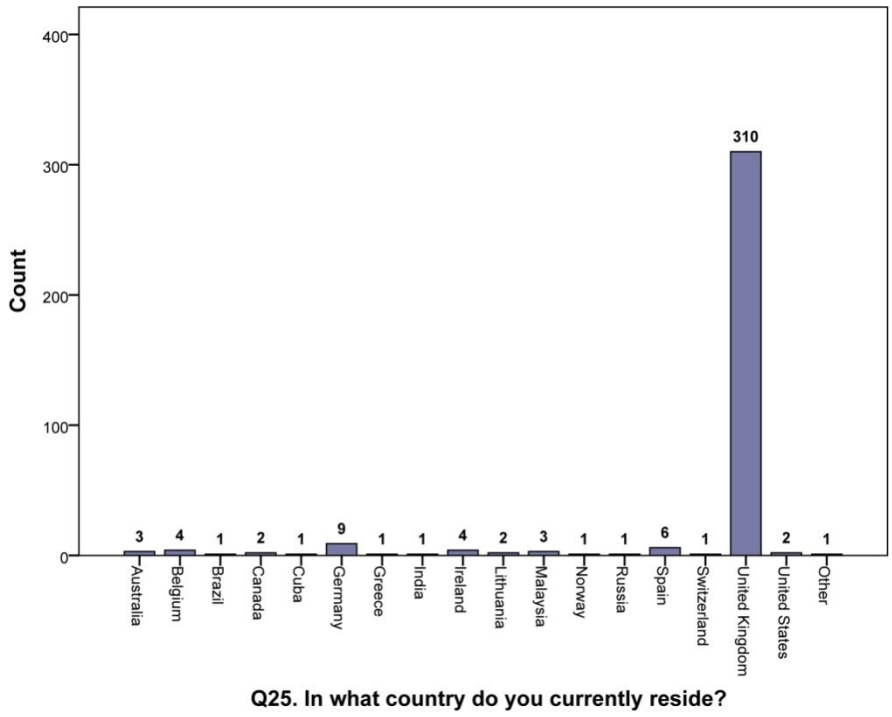


Figure 83. Q25. In what country do you currently reside?

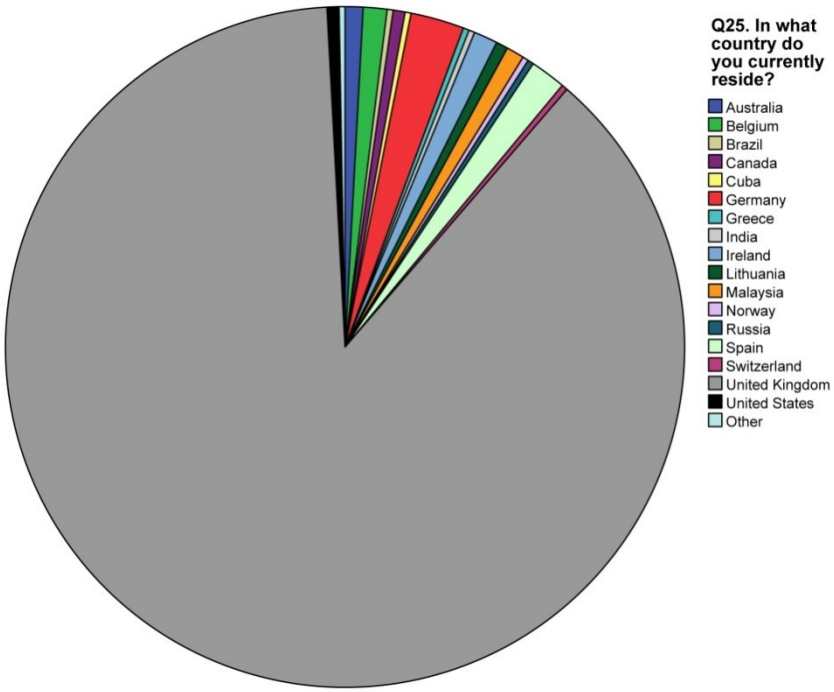


Figure 84. Q25. In what country do you currently reside?

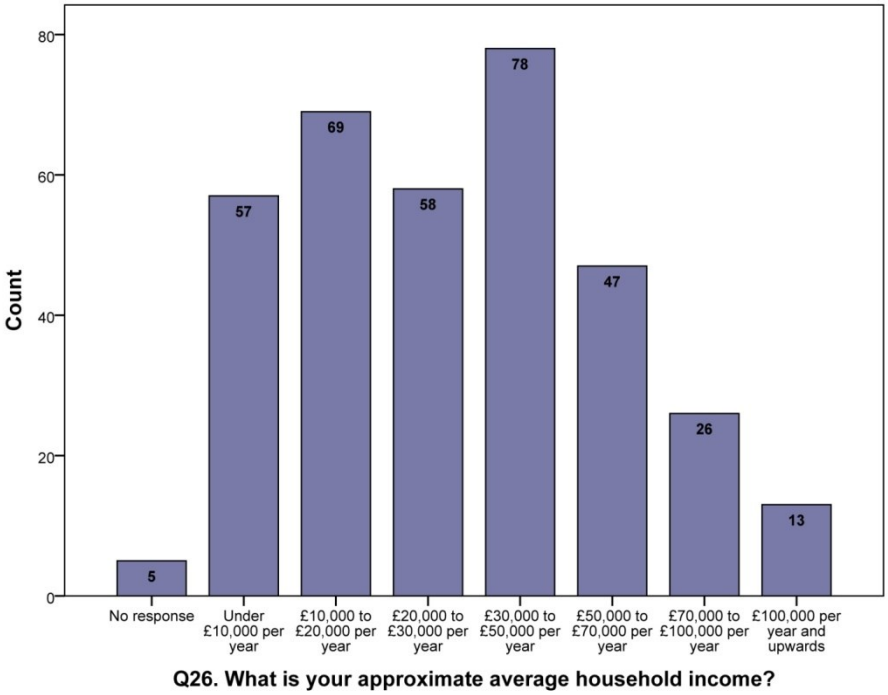


Figure 85. Q26. What is your approximate average household income?

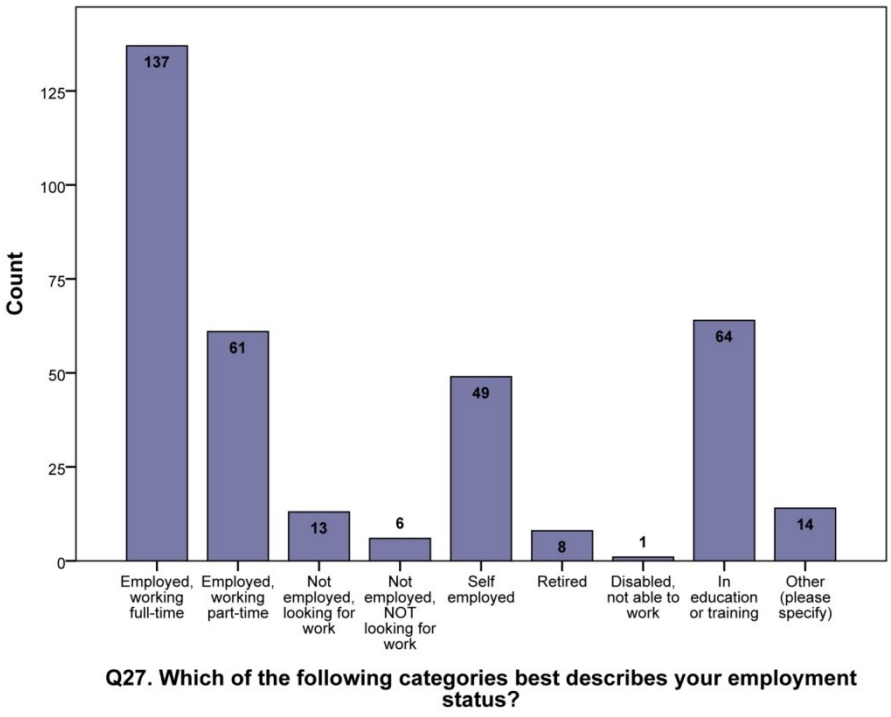


Figure 86. Q27. Which of the following categories best describes your employment status?

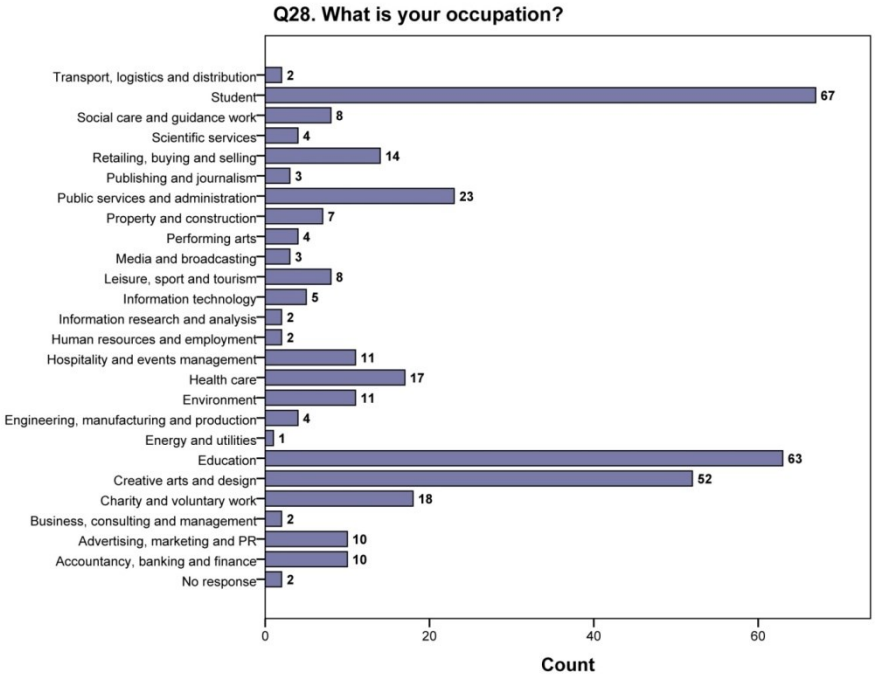


Figure 87. Q28. What is your occupation?

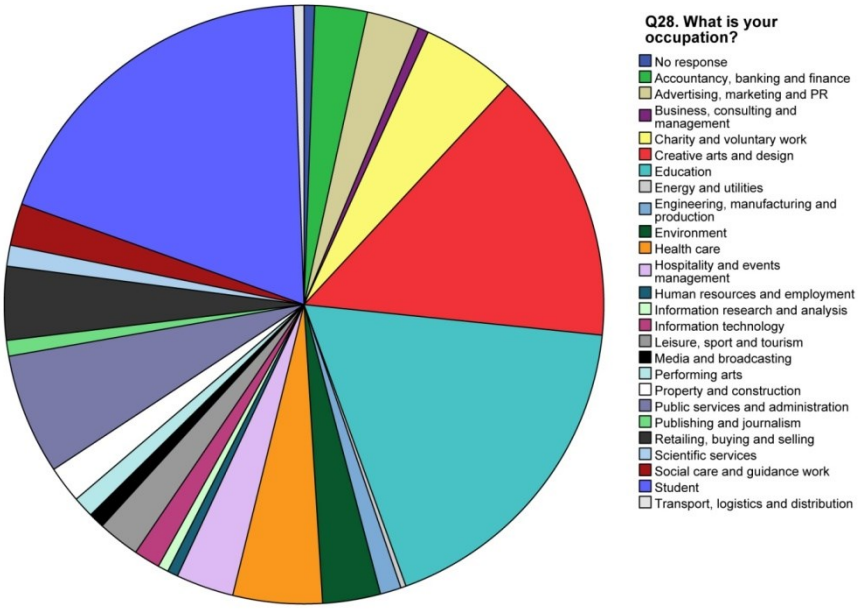


Figure 88. Q28. What is your occupation?

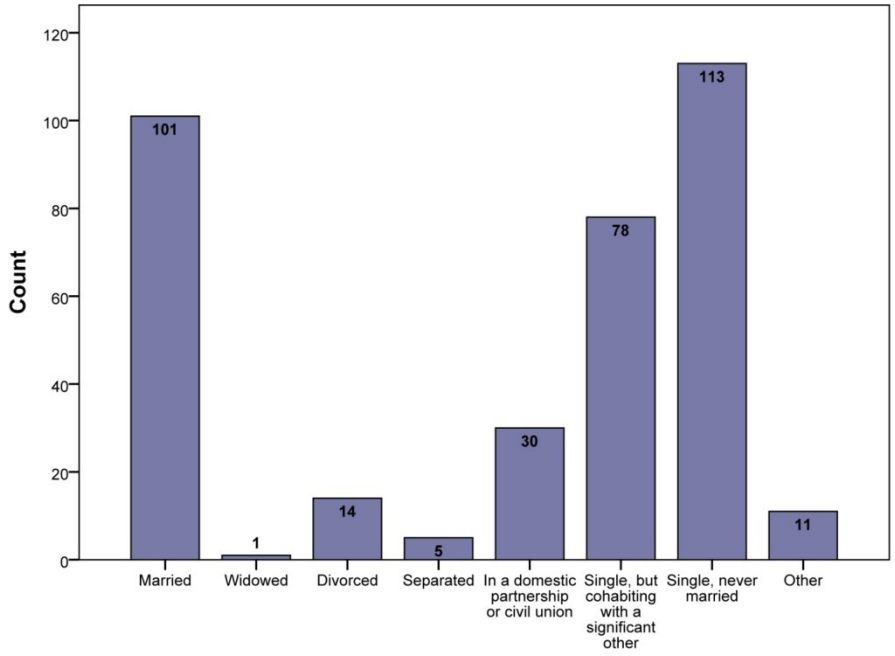


Figure 89. Q29. Which of the following best describes your current relationship status?

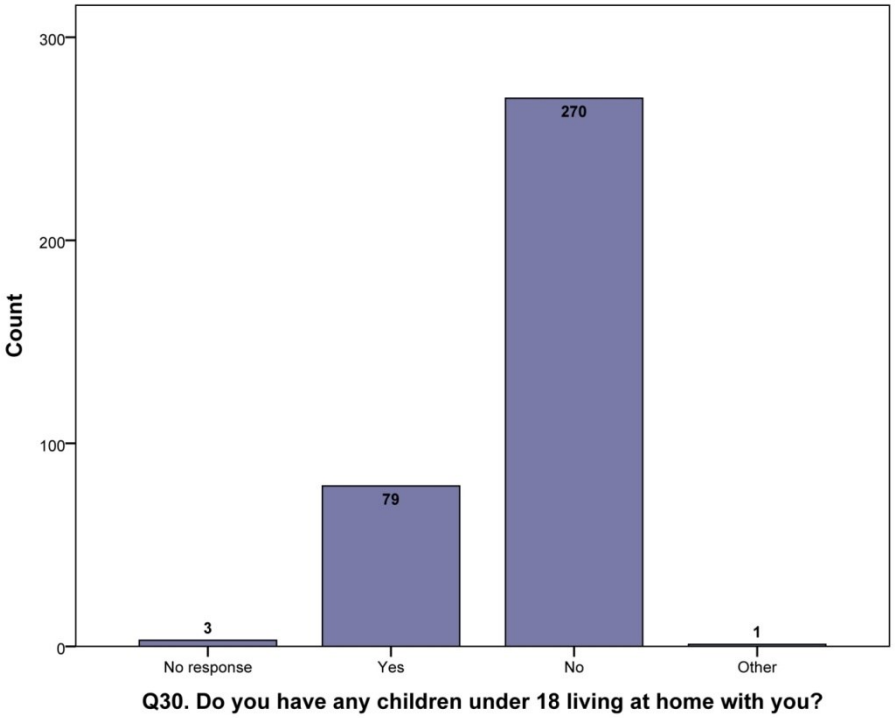


Figure 90. Q30. Do you have any children under 18 living at home with you?

10.5.4 Fashion Shopping Behaviour

Table 25. Types of Shop Frequented

Q2. Where do you prefer to shop?	Frequency
Online	234
On the high street	220
Independent shops	179
Charity shops	172
Department stores	153
Vintage shops	122
At the supermarket	94
Local markets	83
Out of town shopping centres	76
Specialist shops	58
Designer boutiques	36
Other	20

10.5.4.1 Crosstabulations for Demographic Variables and Shopping Behaviours

As no strong correlations of statistical significance were found using the Spearman correlation matrix, a crosstabulation analysis was performed to further interrogate the data for patterns of association. Each type of shop frequented was crosstabulated against demographic variables in order to generate contingency tables, in which each cell shows the frequency of occurrence of that intersection of categories of each of the two variables (Bryman, 2012). To establish whether there is a relationship between each of the types of shop frequented and the demographic variable categories a chi-square statistic plus degrees of freedom and significance level is also presented (Bryman and Cramer, 2011).

Key:	N = Number of shopper types within demographic category S = % of shopper types out of all shopper types (row variable) D = % of shopper types within demographic category (column variable) X^2 = chi-square statistic df = degrees of freedom Sig. = Significance level * p<0.05, **p<0.01, ***p<0.001

Table 26. Age and Types of Shops Frequented

Age		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +	χ^2	df	Sig.
Department Stores	N	29	56	33	19	12	4	6.6	5	0.256
	S	19.0%	36.6%	21.6%	12.4%	7.8%	2.6%			
	D	**41.4%**	**39.2%**	**57.9%**	**45.2%**	**37.5%**	**44.4%**			
Independent Stores	N	28	74	33	23	17	4	4.5	5	0.423
	S	15.6%	41.3%	18.4%	12.8%	9.5%	2.2%			
	D	**40.0%**	**51.7%**	**57.9%**	**54.8%**	**53.1%**	**44.4%**			
High Street Shops	N	52	91	37	21	15	4	11.7	5	0.039*
	S	23.6%	41.4%	16.8%	9.5%	6.8%	1.8%			
	D	**74.3%**	**63.6%**	**64.9%**	**50.0%**	**46.9%**	**44.4%**			
Supermarket	N	14	38	15	9	14	4	8.4	5	0.134
	S	14.9%	40.4%	16.0%	9.6%	14.9%	4.3%			
	D	**20.0%**	**26.6%**	**26.3%**	**21.4%**	**43.8%**	**44.4%**			
Online	N	45	101	41	27	16	4	7.9	5	0.160
	S	19.2%	43.2%	17.5%	11.5%	6.8%	1.7%			
	D	**64.3%**	**70.6%**	**71.9%**	**64.3%**	**50.0%**	**44.4%**			
Shopping Centres	N	20	24	12	12	5	3	6.6	5	0.252
	S	26.3%	31.6%	15.8%	15.8%	6.6%	3.9%			
	D	**28.6%**	**16.8%**	**21.1%**	**28.6%**	**15.6%**	**33.3%**			
Local Markets	N	15	44	12	7	4	1	8.6	5	0.127
	S	18.1%	53.0%	14.5%	8.4%	4.8%	1.2%			
	D	**21.4%**	**30.8%**	**21.1%**	**16.7%**	**12.5%**	**11.1%**			
Designer Boutiques	N	6	12	7	6	4	1	1.9	5	0.857
	S	16.7%	33.3%	19.4%	16.7%	11.1%	2.8%			
	D	**8.6%**	**8.4%**	**12.3%**	**14.3%**	**12.5%**	**11.1%**			
Specialist Shops	N	7	23	11	9	7	1	4.1	5	0.535
	S	12.1%	39.7%	19.0%	15.5%	12.1%	1.7%			
	D	**10.0%**	**16.1%**	**19.3%**	**21.4%**	**21.9%**	**11.1%**			
Vintage Shops	N	24	60	16	16	4	2	12.2	5	0.032*
	S	19.7%	49.2%	13.1%	13.1%	3.3%	1.6%			
	D	**34.3%**	**42.0%**	**28.1%**	**38.1%**	**12.5%**	**22.2%**			
Charity Shops	N	26	81	23	23	15	4	9.7	5	0.085
	S	15.1%	47.1%	13.4%	13.4%	8.7%	2.3%			
	D	**37.1%**	**56.6%**	**40.4%**	**54.8%**	**46.9%**	**44.4%**			

Table 27. Education and Types of Shops Frequented

Education Level		Secondary school	Sixth form college	University graduate	University post-graduate	χ^2	df	Sig.
Department Stores	N	5	23	47	78	6.3	3	0.096
	S	3.3%	15.0%	30.7%	51.0%			
	D	**29.4%**	**41.8%**	**37.3%**	**50.3%**			
Independent Shops	N	3	28	68	80	8	3	0.046*
	S	1.7%	15.6%	38.0%	44.7%			
	D	**17.6%**	**50.9%**	**54.0%**	**51.6%**			
High Street Shops	N	8	38	84	90	5	3	0.174
	S	3.6%	17.3%	38.2%	40.9%			
	D	**47.1%**	**69.1%**	**66.7%**	**58.1%**			
Supermarket	N	7	18	26	43	5.3	3	0.151
	S	7.4%	19.1%	27.7%	45.7%			
	D	**41.2%**	**32.7%**	**20.6%**	**27.7%**			
Online	N	8	35	92	99	5.9	3	0.114
	S	3.4%	15.0%	39.3%	42.3%			
	D	**47.1%**	**63.6%**	**73.0%**	**63.9%**			
Shopping Centres	N	2	12	25	37	1.7	3	0.642
	S	2.6%	15.8%	32.9%	48.7%			
	D	**11.8%**	**21.8%**	**19.8%**	**23.9%**			
Local Markets	N	5	11	30	37	0.7	3	0.868
	S	6.0%	13.3%	36.1%	44.6%			
	D	**29.4%**	**20.0%**	**23.8%**	**23.9%**			
Designer Boutiques	N	2	5	9	20	2.6	3	0.450
	S	5.6%	13.9%	25.0%	55.6%			
	D	**11.8%**	**9.1%**	**7.1%**	**12.9%**			
Specialist Shops	N	4	7	18	29	2.2	3	0.536
	S	6.9%	12.1%	31.0%	50.0%			
	D	**23.5%**	**12.7%**	**14.3%**	**18.7%**			
Vintage Shops	N	3	20	48	51	3.1	3	0.374
	S	2.5%	16.4%	39.3%	41.8%			
	D	**17.6%**	**36.4%**	**38.1%**	**32.9%**			
Charity Shops	N	9	23	70	70	4.3	3	0.230
	S	5.2%	13.4%	40.7%	40.7%			
	D	**52.9%**	**41.8%**	**55.6%**	**45.2%**			

Table 28. Household Income and Types of Shop Frequented

Household income		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.	χ^2	df	Sig.
Department Stores	N	22	22	23	35	25	17	8	13.3	6	0.038*
	S	14.5%	14.5%	15.1%	23.0%	16.4%	11.2%	5.3%			
	D	**38.6%**	**31.9%**	**39.7%**	**44.9%**	**53.2%**	**65.4%**	**61.5%**			
Independent Shops	N	30	33	27	40	25	13	8	1.4	6	0.963
	S	17.0%	18.8%	15.3%	22.7%	14.2%	7.4%	4.5%			
	D	**52.6%**	**47.8%**	**46.6%**	**51.3%**	**53.2%**	**50.0%**	**61.5%**			
High Street Shops	N	29	39	43	53	33	13	7	12	6	0.062
	S	13.4%	18.0%	19.8%	24.4%	15.2%	6.0%	3.2%			
	D	**50.9%**	**56.5%**	**74.1%**	**67.9%**	**70.2%**	**50.0%**	**53.8%**			
Supermarkets	N	14	14	17	23	16	7	3	3.4	6	0.753
	S	14.9%	14.9%	18.1%	24.5%	17.0%	7.4%	3.2%			
	D	**24.6%**	**20.3%**	**29.3%**	**29.5%**	**34.0%**	**26.9%**	**23.1%**			
Online	N	31	48	42	56	31	18	5	10.6	6	0.102
	S	13.4%	20.8%	18.2%	24.2%	13.4%	7.8%	2.2%			
	D	**54.4%**	**69.6%**	**72.4%**	**71.8%**	**66.0%**	**69.2%**	**38.5%**			
Shopping Centres	N	14	9	11	15	16	8	2	9.7	6	0.139
	S	18.7%	12.0%	14.7%	20.0%	21.3%	10.7%	2.7%			
	D	**24.6%**	**13.0%**	**19.0%**	**19.2%**	**34.0%**	**30.8%**	**15.4%**			
Local Markets	N	25	19	9	19	6	3	2	21.2	6	0.002**
	S	30.1%	22.9%	10.8%	22.9%	7.2%	3.6%	2.4%			
	D	**43.9%**	**27.5%**	**15.5%**	**24.4%**	**12.8%**	**11.5%**	**15.4%**			
Designer Boutiques	N	5	7	4	3	7	4	5	17.7	6	0.007**
	S	14.3%	20.0%	11.4%	8.6%	20.0%	11.4%	14.3%			
	D	**8.8%**	**10.1%**	**6.9%**	**3.8%**	**14.9%**	**15.4%**	**38.5%**			
Specialist Shops	N	9	10	8	13	7	4	6	9	6	0.174
	S	15.8%	17.5%	14.0%	22.8%	12.3%	7.0%	10.5%			
	D	**15.8%**	**14.5%**	**13.8%**	**16.7%**	**14.9%**	**15.4%**	**46.2%**			
Vintage Shops	N	20	24	19	30	16	6	6	2.9	6	0.822
	S	16.5%	19.8%	15.7%	24.8%	13.2%	5.0%	5.0%			
	D	**35.1%**	**34.8%**	**32.8%**	**38.5%**	**34.0%**	**23.1%**	**46.2%**			
Charity Shops	N	32	39	26	41	18	8	7	9.3	6	0.160
	S	18.7%	22.8%	15.2%	24.0%	10.5%	4.7%	4.1%			
	D	**56.1%**	**56.5%**	**44.8%**	**52.6%**	**38.3%**	**30.8%**	**53.8%**			

Table 29. Employment Status and Types of Shop Frequented

Employment status		Working full-time	Working part-time	Looking for work	Not employed, NOT	Self employed	Retired	Disabled, not able to work	In education or training	Other	χ^2	df	Sig.
Department Stores	N	69	20	7	1	21	4	0	28	3	11.5	8	0.175
	S	45.1%	13.1%	4.6%	0.7%	13.7%	2.6%	0.0%	18.3%	2.0%			
	D	**50.4%**	**32.8%**	**53.8%**	**16.7%**	**42.9%**	**50.0%**	**0.0%**	**43.8%**	**21.4%**			
Independent Shops	N	78	23	3	3	30	4	1	29	8	14.3	8	0.073
	S	43.6%	12.8%	1.7%	1.7%	16.8%	2.2%	.6%	16.2%	4.5%			
	D	**56.9%**	**37.7%**	**23.1%**	**50.0%**	**61.2%**	**50.0%**	**100.0%**	**45.3%**	**57.1%**			
High Street Shops	N	99	36	7	4	24	3	1	40	6	15.2	8	0.056
	S	45.0%	16.4%	3.2%	1.8%	10.9%	1.4%	.5%	18.2%	2.7%			
	D	**72.3%**	**59.0%**	**53.8%**	**66.7%**	**49.0%**	**37.5%**	**100.0%**	**62.5%**	**42.9%**			
Supermarket	N	43	12	4	1	8	2	0	19	5	7.4	8	0.489
	S	45.7%	12.8%	4.3%	1.1%	8.5%	2.1%	.0%	20.2%	5.3%			
	D	**31.4%**	**19.7%**	**30.8%**	**16.7%**	**16.3%**	**25.0%**	**0.0%**	**29.7%**	**35.7%**			
Online	N	94	43	6	4	30	3	1	42	11	8.2	8	0.417
	S	40.2%	18.4%	2.6%	1.7%	12.8%	1.3%	.4%	17.9%	4.7%			
	D	**68.6%**	**70.5%**	**46.2%**	**66.7%**	**61.2%**	**37.5%**	**100.0%**	**65.6%**	**78.6%**			
Shopping Centres	N	33	12	2	0	9	1	0	14	5	6.6	5	0.252
	S	43.4%	15.8%	2.6%	0.0%	11.8%	1.3%	.0%	18.4%	6.6%			
	D	**24.1%**	**19.7%**	**15.4%**	**0.0%**	**18.4%**	**12.5%**	**0.0%**	**21.9%**	**35.7%**			
Local Markets	N	27	9	3	2	22	1	0	16	3	17.5	8	0.026
	S	32.5%	10.8%	3.6%	2.4%	26.5%	1.2%	.0%	19.3%	3.6%			
	D	**19.7%**	**14.8%**	**23.1%**	**33.3%**	**44.9%**	**12.5%**	**0.0%**	**25.0%**	**21.4%**			
Designer Boutiques	N	15	3	2	0	6	0	0	10	0	7.9	8	0.443
	S	41.7%	8.3%	5.6%	0.0%	16.7%	0.0%	.0%	27.8%	0.0%			
	D	**10.9%**	**4.9%**	**15.4%**	**0.0%**	**12.2%**	**0.0%**	**0.0%**	**15.6%**	**0.0%**			
Specialist Shops	N	22	8	1	1	15	0	0	9	2	10.5	8	0.233
	S	37.9%	13.8%	1.7%	1.7%	25.9%	0.0%	.0%	15.5%	3.4%			
	D	**16.1%**	**13.1%**	**7.7%**	**16.7%**	**30.6%**	**0.0%**	**0.0%**	**14.1%**	**14.3%**			
Vintage Shops	N	48	20	5	1	25	1	1	18	3	12.8	8	0.120
	S	39.3%	16.4%	4.1%	0.8%	20.5%	0.8%	.8%	14.8%	2.5%			
	D	**35.0%**	**32.8%**	**38.5%**	**16.7%**	**51.0%**	**12.5%**	**100.0%**	**28.1%**	**21.4%**			
Charity Shops	N	53	32	9	3	36	5	1	24	9	26.3	8	0.001***
	S	30.8%	18.6%	5.2%	1.7%	20.9%	2.9%	.6%	14.0%	5.2%			
	D	**38.7%**	**52.5%**	**69.2%**	**50.0%**	**73.5%**	**62.5%**	**100.0%**	**37.5%**	**64.3%**			

Table 30. Relationship Status and Types of Shop Frequented

Relationship status		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other	χ^2	df	Sig.
Department Stores	N	55	0	6	2	13	24	48	5	10.9	7	0.141
	S	35.9%	0.0%	3.9%	1.3%	8.5%	15.7%	31.4%	3.3%			
	D	**54.5%**	**0.0%**	**42.9%**	**40.0%**	**43.3%**	**30.8%**	**42.5%**	**45.5%**			
Independent Shops	N	55	1	6	2	18	41	51	5	4.8	7	0.686
	S	30.7%	.6%	3.4%	1.1%	10.1%	22.9%	28.5%	2.8%			
	D	**54.5%**	**100.0%**	**42.9%**	**40.0%**	**60.0%**	**52.6%**	**45.1%**	**45.5%**			
High Street Shops	N	58	0	10	2	17	48	75	10	9.3	7	0.233
	S	26.4%	.0%	4.5%	0.9%	7.7%	21.8%	34.1%	4.5%			
	D	**57.4%**	**0.0%**	**71.4%**	**40.0%**	**56.7%**	**61.5%**	**66.4%**	**90.9%**			
Supermarket	N	36	0	6	1	7	16	26	2	9.4	7	0.226
	S	38.3%	.0%	6.4%	1.1%	7.4%	17.0%	27.7%	2.1%			
	D	**35.6%**	**0.0%**	**42.9%**	**20.0%**	**23.3%**	**20.5%**	**23.0%**	**18.2%**			
Online	N	64	1	4	3	25	55	75	7	14.4	7	0.044*
	S	27.4%	.4%	1.7%	1.3%	10.7%	23.5%	32.1%	3.0%			
	D	**63.4%**	**100.0%**	**28.6%**	**60.0%**	**83.3%**	**70.5%**	**66.4%**	**63.6%**			
Shopping Centres	N	23	0	1	1	11	16	21	3	7	7	0.429
	S	30.3%	.0%	1.3%	1.3%	14.5%	21.1%	27.6%	3.9%			
	D	**22.8%**	**0.0%**	**7.1%**	**20.0%**	**36.7%**	**20.5%**	**18.6%**	**27.3%**			
Local Markets	N	12	0	3	3	12	18	33	2	18.4	7	0.010*
	S	14.5%	.0%	3.6%	3.6%	14.5%	21.7%	39.8%	2.4%			
	D	**11.9%**	**0.0%**	**21.4%**	**60.0%**	**40.0%**	**23.1%**	**29.2%**	**18.2%**			
Designer Boutiques	N	12	1	2	0	3	3	12	3	16.9	7	0.018*
	S	33.3%	2.8%	5.6%	0.0%	8.3%	8.3%	33.3%	8.3%			
	D	**11.9%**	**100.0%**	**14.3%**	**0.0%**	**10.0%**	**3.8%**	**10.6%**	**27.3%**			
Specialist Shops	N	17	1	5	1	1	13	17	3	13.8	7	0.055
	S	29.3%	1.7%	8.6%	1.7%	1.7%	22.4%	29.3%	5.2%			
	D	**16.8%**	**100.0%**	**35.7%**	**20.0%**	**3.3%**	**16.7%**	**15.0%**	**27.3%**			
Vintage Shops	N	30	0	2	2	8	32	45	3	8.1	7	0.324
	S	24.6%	.0%	1.6%	1.6%	6.6%	26.2%	36.9%	2.5%			
	D	**29.7%**	**0.0%**	**14.3%**	**40.0%**	**26.7%**	**41.0%**	**39.8%**	**27.3%**			
Charity Shops	N	46	0	8	5	10	45	53	5	12.6	7	0.083
	S	26.7%	.0%	4.7%	2.9%	5.8%	26.2%	30.8%	2.9%			
	D	**45.5%**	**0.0%**	**57.1%**	**100.0%**	**33.3%**	**57.7%**	**46.9%**	**45.5%**			

Table 31. Children at Home and Types of Shop Frequented

Children at Home		Yes	No	Other	χ^2	df	Sig.
Department Stores	N	36	115	1	1.5	2	0.466
	S	23.7%	75.7%	0.7%			
	D	**45.6%**	**42.6%**	**100.0%**			
Independent Shops	N	41	136	1	1	2	0.599
	S	23.0%	76.4%	0.6%			
	D	**51.9%**	**50.4%**	**100.0%**			
High Street Shops	N	45	173	1	1.9	2	0.383
	S	20.5%	79.0%	0.5%			
	D	**57.0%**	**64.1%**	**100.0%**			
Supermarket	N	29	64	0	5.7	2	0.059
	S	31.2%	68.8%	0.0%			
	D	**36.7%**	**23.7%**	**0.0%**			
Online	N	57	174	1	2.1	2	0.344
	S	24.6%	75.0%	.4%			
	D	**72.2%**	**64.4%**	**100.0%**			
Shopping Centres	N	20	55	0	1.2	2	0.559
	S	26.7%	73.3%	0.0%			
	D	**25.3%**	**20.4%**	**0.0%**			
Local Markets	N	13	67	1	5.7	2	0.057
	S	16.0%	82.7%	1.2%			
	D	**16.5%**	**24.8%**	**100.0%**			
Designer Boutiques	N	7	27	1	9.1	2	0.010**
	S	20.0%	77.1%	2.9%			
	D	**8.9%**	**10.0%**	**100.0%**			
Specialist Shops	N	10	46	1	6	2	0.049*
	S	17.5%	80.7%	1.8%			
	D	**12.7%**	**17.0%**	**100.0%**			
Vintage Shops	N	24	97	1	2.7	2	0.259
	S	19.7%	79.5%	0.8%			
	D	**30.4%**	**35.9%**	**100.0%**			
Charity Shops	N	36	134	1	1.4	2	0.484
	S	21.1%	78.4%	0.6%			
	D	**45.6%**	**49.6%**	**100.0%**			

Retailers Most Frequented

Table 32. Retailers Most Frequented

[Q3. Please list the 3 shops you most regularly buy clothes from…]

Rank	Shop	Frequency	Percent	Valid Percent	Cumulative Percent
1	H&M	97	9.2	9.2	9.2
2	Charity shop (unspecified)	68	6.4	6.4	15.6
3	Primark / Penneys	54	5.1	5.1	20.7
4	Marks and Spencer	53	5.0	5.0	25.7
5	Topshop	47	4.4	4.4	30.1
6	No response	46	4.3	4.3	34.5
7	New Look	43	4.1	4.1	38.5
8	ASOS	43	4.1	4.1	42.6
9	Zara	41	3.9	3.9	46.5
10	Next	27	2.5	2.5	49.0
11	Asda	26	2.5	2.5	51.5
12	Debenhams	26	2.5	2.5	53.9
13	eBay	23	2.2	2.2	56.1
14	Dorothy Perkins	20	1.9	1.9	58.0
15	Tesco	19	1.8	1.8	59.8
16	T K Maxx	18	1.7	1.7	61.5
17	Sainsburys	13	1.2	1.2	62.7
18	River Island	12	1.1	1.1	63.8
19	Vintage (unspecified)	11	1.0	1.0	64.9
20	Mango	10	.9	.9	65.8

Table 33. Age and Retailers Most Frequented

Age		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +	df	Sig.
H&M	N	28	52	13	3	1	0	5	0.021*
	S	28.9%	53.6%	13.4%	3.1%	1.0%	0.0%		
	D	**40.0%**	**36.4%**	**22.8%**	**7.1%**	**3.1%**	**0.0%**		
Charity Shops	N	8	36	8	8	7	1	5	0.140
	S	11.8%	52.9%	11.8%	11.8%	10.3%	1.5%		
	D	**11.4%**	**25.2%**	**14.0%**	**19.0%**	**21.9%**	**11.1%**		
Primark	N	20	20	3	7	3	1	5	0.271
	S	37.0%	37.0%	5.6%	13.0%	5.6%	1.9%		
	D	**28.6%**	**14.0%**	**5.3%**	**16.7%**	**9.4%**	**11.1%**		
M&S	N	2	15	6	13	14	3	5	0.000***
	S	3.8%	28.3%	11.3%	24.5%	26.4%	5.7%		
	D	**2.9%**	**10.5%**	**10.5%**	**31.0%**	**43.8%**	**33.3%**		
Topshop	N	22	14	8	0	3	0	5	0.009**
	S	46.8%	29.8%	17.0%	0.0%	6.4%	0.0%		
	D	**31.4%**	**9.8%**	**14.0%**	**0.0%**	**9.4%**	**0.0%**		
New Look	N	16	20	5	1	0	1	5	0.167
	S	37.2%	46.5%	11.6%	2.3%	0.0%	2.3%		
	D	**22.9%**	**14.0%**	**8.8%**	**2.4%**	**0.0%**	**11.1%**		
ASOS	N	11	24	6	2	0	0	5	0.276
	S	25.6%	55.8%	14.0%	4.7%	0.0%	0.0%		
	D	**15.7%**	**16.8%**	**10.5%**	**4.8%**	**0.0%**	**0.0%**		
Zara	N	18	13	5	5	0	0	5	0.070
	S	43.9%	31.7%	12.2%	12.2%	0.0%	0.0%		
	D	**25.7%**	**9.1%**	**8.8%**	**11.9%**	**0.0%**	**0.0%**		
Next	N	3	9	7	5	3	0	5	0.080
	S	11.1%	33.3%	25.9%	18.5%	11.1%	0.0%		
	D	**4.3%**	**6.3%**	**12.3%**	**11.9%**	**9.4%**	**0.0%**		
Asda	N	2	12	4	2	5	1	5	0.078
	S	7.7%	46.2%	15.4%	7.7%	19.2%	3.8%		
	D	**2.9%**	**8.4%**	**7.0%**	**4.8%**	**15.6%**	**11.1%**		

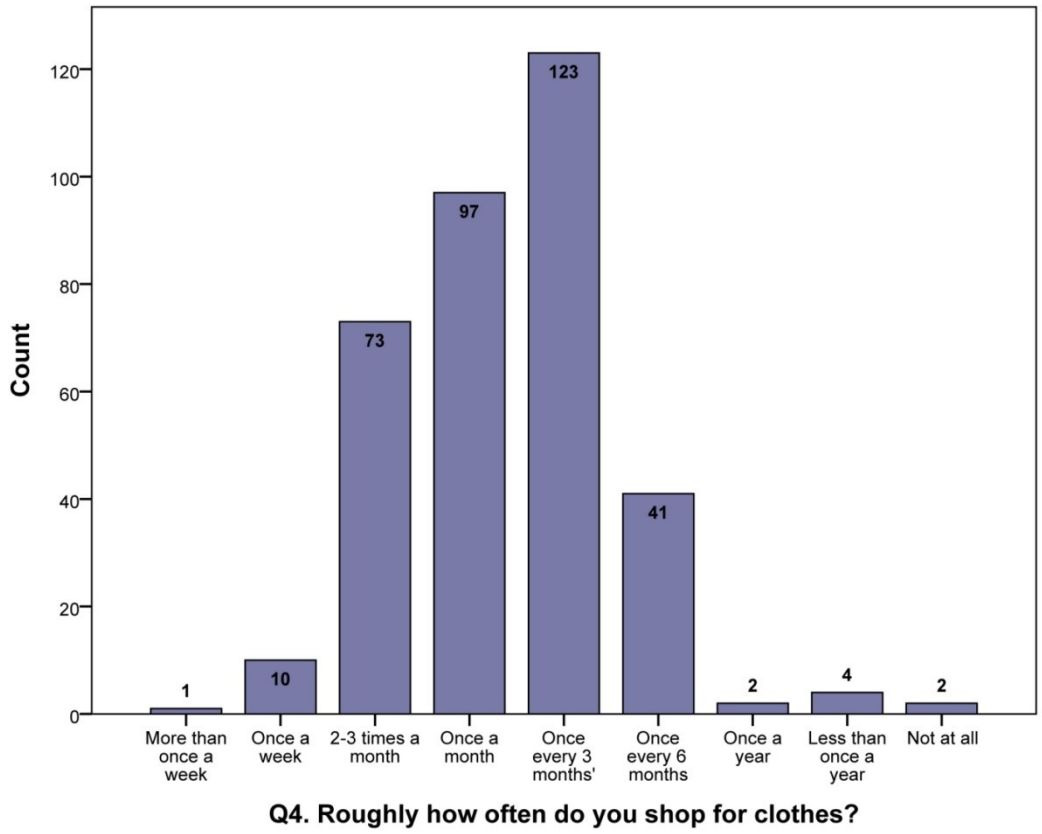


Figure 91. Frequency of Purchasing

Table 34. Frequency of Purchasing

Q4. Clothes shopping frequency	N	%
Once every 3 months'	123	34.8%
Once a month	97	27.5%
2-3 times a month	73	20.7%
Once every 6 months	41	11.6%
Once a week	10	2.8%
Less than once a year	4	1.1%
Once a year	2	0.6%
Not at all	2	0.6%
More than once a week	1	0.3%
Total	353	100%

10.5.4.2 Crosstabulations for Demographic Variables and Shopping Frequency

Demographic variables and the shopping frequency variable were correlated against each other using Spearman's rho. No strong correlations of statistical significance were found, which led to the analysis through the use of contingency tables. To this end, a crosstabulation analysis was performed to further interrogate the data for patterns of association.

Table 35. Age and Clothes Shopping Frequency

Age		**18 - 24**	**25 - 34**	**35 - 44**	**45 - 54**	**55 - 64**	**65 +**
More than once a week	N	1	0	0	0	0	0
	S	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Once a week	N	1	5	2	1	1	0
	S	10.0%	50.0%	20.0%	10.0%	10.0%	0.0%
	D	**1.4%**	**3.5%**	**3.5%**	**2.4%**	**3.1%**	**0.0%**
2 - 3 times a month	N	27	26	5	8	6	1
	S	37.00%	35.60%	6.80%	11.00%	8.20%	1.40%
	D	**38.60%**	**18.20%**	**8.80%**	**19.00%**	**18.80%**	**11.10%**
Once a month	N	20	36	17	9	11	4
	S	20.6%	37.1%	17.5%	9.3%	11.3%	4.1%
	D	**28.6%**	**25.2%**	**29.8%**	**21.4%**	**34.4%**	**44.4%**
Once every 3 months	N	18	53	22	16	10	4
	S	14.6%	43.1%	17.9%	13.0%	8.1%	3.3%
	D	**25.7%**	**37.1%**	**38.6%**	**38.1%**	**31.3%**	**44.4%**
Once every 6 months	N	3	21	8	6	3	0
	S	7.3%	51.2%	19.5%	14.6%	7.3%	0.0%
	D	**4.3%**	**14.7%**	**14.0%**	**14.3%**	**9.4%**	**0.0%**
Once a year	N	0	2	0	0	0	0
	S	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Less than once a year	N	0	0	2	2	0	0
	S	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**3.5%**	**4.8%**	**0.0%**	**0.0%**
Not at all	N	0	0	1	0	1	0
	S	0.0%	0.0%	50.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**1.8%**	**0.0%**	**3.1%**	**0.0%**
		χ^2	52.2	**df**	40	**Sig.**	0.094

Table 36. Education Level and Clothes Shopping Frequency

Education Level		Secondary	Sixth form	University	University
More than once a week	N	0	0	0	1
	S	0.00%	0.00%	0.00%	100.00%
	D	**0.00%**	**0.00%**	**0.00%**	**0.60%**
Once a week	N	1	1	2	6
	S	10.0%	10.0%	20.0%	60.0%
	D	**5.9%**	**1.8%**	**1.6%**	**3.9%**
2 - 3 times a month	N	2	15	29	27
	S	2.7%	20.5%	39.7%	37.0%
	D	**11.8%**	**27.3%**	**23.0%**	**17.4%**
Once a month	N	8	14	40	35
	S	8.2%	14.4%	41.2%	36.1%
	D	**47.1%**	**25.5%**	**31.7%**	**22.6%**
Once every 3 months	N	5	17	39	62
	S	4.1%	13.8%	31.7%	50.4%
	D	**29.4%**	**30.9%**	**31.0%**	**40.0%**
Once every 6 months	N	1	6	13	21
	S	2.4%	14.6%	31.7%	51.2%
	D	**5.9%**	**10.9%**	**10.3%**	**13.5%**
Once a year	N	0	1	1	0
	S	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**1.8%**	**.8%**	**0.0%**
Less than once a year	N	0	1	2	1
	S	0.0%	25.0%	50.0%	25.0%
	D	**0.0%**	**1.8%**	**1.6%**	**.6%**
Not at all	N	0	0	0	2
	S	0.0%	0.0%	0.0%	100.0%
	D	**0.0%**	**0.0%**	**0.0%**	**1.3%**
χ2 20.3	**df**	24	**Sig.**	0.677	

Table 37. Household Income and Clothes Shopping Frequency

Household income		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
More than once a week	N	0	0	0	1	0	0	0
	S	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
	D	**0.00%**	**0.00%**	**0.00%**	**1.30%**	**0.00%**	**0.00%**	**0.00%**
Once a week	N	1	2	1	5	1	0	0
	S	10.00%	20.00%	10.00%	50.00%	10.00%	0.00%	0.00%
	D	**1.80%**	**2.90%**	**1.70%**	**6.40%**	**2.10%**	**0.00%**	**0.00%**
2 - 3 times a month	N	9	16	9	19	12	4	3
	S	12.5%	22.2%	12.5%	26.4%	16.7%	5.6%	4.2%
	D	**15.8%**	**23.2%**	**15.5%**	**24.4%**	**25.5%**	**15.4%**	**23.1%**
Once a month	N	12	22	19	19	10	8	6
	S	12.50%	22.90%	19.80%	19.80%	10.40%	8.30%	6.30%
	D	**21.10%**	**31.90%**	**32.80%**	**24.40%**	**21.30%**	**30.80%**	**46.20%**
Once every 3 months	N	28	16	19	25	21	10	4
	S	22.8%	13.0%	15.4%	20.3%	17.1%	8.1%	3.3%
	D	**49.1%**	**23.2%**	**32.8%**	**32.1%**	**44.7%**	**38.5%**	**30.8%**
Once every 6 months	N	6	11	10	6	3	4	0
	S	15.00%	27.50%	25.00%	15.00%	7.50%	10.00%	0.00%
	D	**10.50%**	**15.90%**	**17.20%**	**7.70%**	**6.40%**	**15.40%**	**0.00%**
Once a year	N	0	1	0	1	0	0	0
	S	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**
Less than once a year	N	0	1	0	2	0	0	0
	S	0.0%	33.3%	0.0%	66.7%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**
Not at all	N	1	0	0	0	0	0	0
	S	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	D	**1.80%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
		χ^2	43.1	**df**	48	**Sig.**	0.673	

Table 38. Employment Status and Clothes Shopping Frequency

Employment status		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other (please specify)
More than once a week	N	0	1	0	0	0	0	0	0	0
	S	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	D	**0.00%**	**1.60%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Once a week	N	6	0	0	1	1	0	0	2	0
	S	60.0%	0.0%	0.0%	10.0%	10.0%	0.0%	0.0%	20.0%	0.0%
	D	**4.4%**	**0.0%**	**0.0%**	**16.7%**	**2.0%**	**0.0%**	**0.0%**	**3.1%**	**0.0%**
2 - 3 times a month	N	26	18	2	1	4	1	0	17	4
	S	35.60%	24.70%	2.70%	1.40%	5.50%	1.40%	0.00%	23.30%	5.50%
	D	**19.00%**	**29.50%**	**15.40%**	**16.70%**	**8.20%**	**12.50%**	**0.00%**	**26.60%**	**28.60%**
Once a month	N	45	17	1	0	13	6	0	12	3
	S	46.4%	17.5%	1.0%	0.0%	13.4%	6.2%	0.0%	12.4%	3.1%
	D	**32.8%**	**27.9%**	**7.7%**	**0.0%**	**26.5%**	**75.0%**	**0.0%**	**18.8%**	**21.4%**
Once every 3 months	N	40	15	9	2	26	1	1	24	5
	S	32.5%	12.2%	7.3%	1.6%	21.1%	.8%	.8%	19.5%	4.1%
	D	**29.2%**	**24.6%**	**69.2%**	**33.3%**	**53.1%**	**12.5%**	**100.0%**	**37.5%**	**35.7%**
Once every 6 months	N	16	7	1	1	5	0	0	9	2
	S	39.0%	17.1%	2.4%	2.4%	12.2%	0.0%	0.0%	22.0%	4.9%
	D	**11.7%**	**11.5%**	**7.7%**	**16.7%**	**10.2%**	**0.0%**	**0.0%**	**14.1%**	**14.3%**
Once a year	N	2	0	0	0	0	0	0	0	0
	S	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Less than once a year	N	1	2	0	1	0	0	0	0	0
	S	25.0%	50.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**.7%**	**3.3%**	**0.0%**	**16.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Not at all	N	1	1	0	0	0	0	0	0	0
	S	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	D	**0.70%**	**1.60%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
		χ^2	74	**df**	64	**Sig.**	0.184			

Table 39. Relationship Status and Clothes Shopping Frequency

Relationship status		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
More than once a week	N	0	0	0	0	0	0	1	0
	S	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**.9%**	**0.0%**
Once a week	N	2	0	0	0	0	2	5	1
	S	20.0%	0.0%	0.0%	0.0%	0.0%	20.0%	50.0%	10.0%
	D	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.6%**	**4.4%**	**9.1%**
2 - 3 times a month	N	18	0	3	0	5	16	29	2
	S	24.7%	0.0%	4.1%	0.0%	6.8%	21.9%	39.7%	2.7%
	D	**17.8%**	**0.0%**	**21.4%**	**0.0%**	**16.7%**	**20.5%**	**25.7%**	**18.2%**
Once a month	N	27	0	3	3	8	21	32	3
	S	27.8%	0.0%	3.1%	3.1%	8.2%	21.6%	33.0%	3.1%
	D	**26.7%**	**0.0%**	**21.4%**	**60.0%**	**26.7%**	**26.9%**	**28.3%**	**27.3%**
Once every 3 months	N	44	0	7	1	9	27	32	3
	S	35.8%	0.0%	5.7%	.8%	7.3%	22.0%	26.0%	2.4%
	D	**43.6%**	**0.0%**	**50.0%**	**20.0%**	**30.0%**	**34.6%**	**28.3%**	**27.3%**
Once every 6 months	N	8	0	1	1	6	10	13	2
	S	19.50%	0.00%	2.40%	2.40%	14.60%	24.40%	31.70%	4.90%
	D	**7.90%**	**0.00%**	**7.10%**	**20.00%**	**20.00%**	**12.80%**	**11.50%**	**18.20%**
Once a year	N	0	0	0	0	1	0	1	0
	S	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.3%**	**0.0%**	**.9%**	**0.0%**
Less than once a year	N	2	0	0	0	1	1	0	0
	S	50.0%	0.0%	0.0%	0.0%	25.0%	25.0%	0.0%	0.0%
	D	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**3.3%**	**1.3%**	**0.0%**	**0.0%**
Not at all	N	0	1	0	0	0	1	0	0
	S	0.0%	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%
	D	**0.0%**	**100.0%**	**0.0%**	**0.0%**	**0.0%**	**1.3%**	**0.0%**	**0.0%**
		χ^2	207.6	**df**	56	**Sig.**	0.000*		

Table 40. Children at Home (under 18) and Clothes Shopping Frequency

Children at Home		Yes	No	Other
More than once a week	N	0	1	0
	S	0.00%	100.00%	0.00%
	D	**0.00%**	**0.40%**	**0.00%**
Once a week	N	3	7	0
	S	30.00%	70.00%	0.00%
	D	**3.80%**	**2.60%**	**0.00%**
2 - 3 times a month	N	17	56	0
	S	23.3%	76.7%	0.0%
	D	**21.5%**	**20.7%**	**0.0%**
Once a month	N	16	79	1
	S	16.7%	82.3%	1.0%
	D	**20.3%**	**29.3%**	**100.0%**
Once every 3 months	N	28	93	0
	S	23.1%	76.9%	0.0%
	D	**35.4%**	**34.4%**	**0.0%**
Once every 6 months	N	11	30	0
	S	26.8%	73.2%	0.0%
	D	**13.9%**	**11.1%**	**0.0%**
Once a year	N	0	2	0
	S	0.0%	100.0%	0.0%
	D	**0.0%**	**.7%**	**0.0%**
Less than once a year	N	3	1	0
	S	75.00%	25.00%	0.00%
	D	**3.80%**	**0.40%**	**0.00%**
Not at all	N	1	1	0
	S	50.0%	50.0%	0.0%
	D	**1.3%**	**.4%**	**0.0%**
χ2 13.2	**df**	16	**Sig.** 0.655	

10.5.4.3 ANOVA Tests for Demographic Variables and Shopping Behaviours

Likert scale data for Questions 5, 6 and 7 were analysed with ANOVA tests to find possible associations and relationships between demographic variables and shopping behaviours. The mean scores of each group within each demographic variable were compared to find significant differences. Variables from Questions 5, 6 and 7 with a significance level of $p<0.05$, $p<0.01$ and $p<0.001$ are presented in the following tables for each of the demographic categories. Post hoc analysis which revealed which groups within each demographic variable showed significant mean differences at the $p<0.05$, $p<0.01$ and $p<0.001$ levels is also presented.

Table 41. ANOVA Test for Age and Shopping Behaviour

Variables		Mean Scores of Age Groups						F Value	Sig.
		18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 +		
Q5NB	I am keen to try new brands and designs.	3.29	2.96	3.09	2.69	2.47	3	3.8	0.002**
Q5LE	I look for a label to prove that the garment was made ethically.	2.1	2.55	2.63	2.55	2.55	2.63	2.5	0.033*
Q6SF	When I am shopping for clothes I am looking for clothes that are similar to what my friends are wearing.	2.09	2.06	1.93	1.79	1.61	1.88	2.5	0.033*
Q6TR	When I am shopping for clothes I am looking for on trend items.	3.01	2.49	2.39	2.32	1.97	2.38	6.5	0.000***
Q6DH	When I am shopping for clothes I am looking for designer ranges from high street brands.	2.51	2.01	2.21	2.05	2.52	2.25	3.1	0.009**
Q6CB	When I am shopping for clothes I am looking for clothes that have been seen on a celebrity.	1.62	1.5	1.3	1.4	1.24	1.5	2.3	0.041*
Q6FT	When I am shopping for clothes I am looking for fair trade clothing.	2.25	2.47	2.77	2.69	2.54	3.13	2.9	0.013*
Q7RW	How does buying clothes make you feel? Great, it is a reward.	3.63	3.32	3.11	2.95	2.53	2.5	7.3	0.000***
Q7MS	How does buying clothes make you feel? Like I want even more stuff.	2.73	2.49	2.23	2.24	2	1.88	3.6	0.004**
Q7NT	How does buying clothes make you feel? Like I want to show off my new things.	3.47	3.37	2.88	2.67	2.62	2.88	7.4	0.000***
Q7BB	How does buying clothes make you feel? Guilty and a bit broke.	3.06	3.02	2.67	2.52	2.37	2.5	4.6	0.000***
Q7LT	How does buying clothes make you feel? Like I am keeping up with the latest trends.	2.54	2.12	1.91	1.9	2.07	2	4	0.001***
Q7SW	How does buying clothes make you feel? Happier with the selection in my wardrobe.	3.83	3.75	3.44	3.17	3.26	3.78	6	0.000***
Q7MO	How does buying clothes make you feel? Like I am prepared for more occasions.	3.51	3.47	3.16	3.02	3.27	3.38	2.5	0.03*
*p<0.05, **p<0.01, ***p<0.001									

Table 42. ANOVA Test for Education Level and Shopping Behaviour

Variables		Mean Scores of Education Level Groups				F Value	Sig.
		Secondary school	Sixth form college	University graduate	University post-		
Q5CC	I tend to buy the cheapest clothes.	2.88	2.93	2.94	2.57	3.9	0.008**
Q6VI	When I am shopping for clothes I am looking for versatile items that go with	3.67	4.13	3.77	3.8	3.7	0.011*
*p<0.05, **p<0.01, ***p<0.001							

Table 43. ANOVA Test for Household Income and Shopping Behaviour

Variables		Mean Scores of Household Income Groups							F Value	Sig.
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.		
Q5CC	I tend to buy the cheapest clothes.	2.73	3.03	2.78	2.82	2.8	2.46	2.08	2.4	0.025*
Q6RF	When I am shopping for clothes I am looking for clothes made from recycled fabric.	2.47	2.5	2.29	2.25	2.18	1.85	2.08	2.2	0.039*
Q6UP	When I am shopping for clothes I am looking for upcycled clothes made from reused textiles.	2.44	2.44	2.22	2.22	1.93	1.88	2.15	2.2	0.046*
*p<0.05, **p<0.01, ***p<0.001										

Table 44. ANOVA Test for Employment Status and Shopping Behaviour

Variables		Mean Scores of Employment Status Groups									F Value	Sig.
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other		
Q5FB	If something takes my fancy I buy it	3.53	3.52	3.69	2.67	3.13	3.43	3	3.45	3.5	2.1	0.035*
Q5CC	I tend to buy the cheapest clothes	2.7	2.95	3.23	3.17	2.46	2.38	3	2.76	3.43	2.5	0.013*
Q5EC	I seek out shops that stock ethical	2.3	2.49	2.54	2.33	3.04	2.63	2	2.48	2.79	2.3	0.022*
Q6TR	I shop for… on trend items.	2.53	2.49	2.31	1.83	2.17	2.14	3	2.82	2.86	2.4	0.016*
Q6DH	I shop for… designer ranges from high street brands	2.28	2.03	1.77	1.77	2.17	1.86	2	2.51	1.86	2.5	0.012*
Q6OC	I shop for… organic clothing.	2.13	2.33	2	2	2.74	2.29	2	2.3	2.5	2.1	0.038*
Q6SH	I shop for… second hand clothes.	2.78	2.97	3.5	2.83	3.46	2.43	3	2.63	3	2.6	0.009**
Q6RF	I shop for… clothes made from recycled fabric	2.13	2.17	2.46	2.33	2.79	2.57	2	2.25	2.43	2.6	0.010**
Q6UP	I shop for… upcycled clothes made from reused textiles	2.16	2.13	2.54	2.17	2.79	2.29	1	1.94	2.5	3.3	0.001***
Q6EF	I shop for… ecofashion.	2.12	2.28	2.38	2.33	2.85	2.43	2	2.25	2.79	2.8	0.005**
*p<0.05, **p<0.01, ***p<0.001												

Table 45. ANOVA Test for Relationship Status and Shopping Behaviour

Variables		Mean Scores of Relationship Status Groups								F Value	Sig.
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other		
Q6BK	When I am shopping for clothes I am looking for brands I know and	3.69	5	3.64	2.75	3.8	3.4	3.82	3.27	3.1	0.003**
Q6VC	When I am shopping for clothes I am looking for vintage clothing.	2.64	1	2.15	3.5	2.47	2.82	2.76	3.27	2.2	0.031*
Q6SH	When I am shopping for clothes I am looking for second hand	2.86	1	3.21	3.75	2.47	3.18	2.82	2.9	2.1	0.039*
Q6FT	When I am shopping for clothes I am looking for fair trade clothing.	2.73	1	2.25	3.25	2.2	2.56	2.37	2.91	2.7	0.009**
Q7RW	How does buying clothes make you feel? Great it's a reward.	3.15	2	2.71	2	3.03	3.29	3.4	3	2.4	0.020*
Q7NT	How does buying clothes make you feel? Like I want to show off my	3.06	2	2.77	2	3.14	3.15	3.36	2.82	2.1	0.047*
Q7BB	How does buying clothes make you feel? Guilty and a bit broke.	2.74	1	1.92	3	2.97	2.81	3.04	2.73	3.1	0.003**
Q7SW	How does buying clothes make you feel? Happier with the selection in my wardrobe.	3.45	2	3.57	2.25	3.69	3.6	3.8	3.45	3.6	0.001***
*p<0.05, **p<0.01, ***p<0.001											

Table 46. ANOVA Test for Children (under 18) at Home and Shopping Behaviour

Variables		Mean Scores of Children at Home Groups			F Value	Sig.
Q7SW	How does buying clothes make you feel? Happier with the selection in my wardrobe.	Yes	No	Other		
		3.42	3.65	2	4.2	0.015*
*p<0.05, **p<0.01, ***p<0.001						

Table 47. ANOVA Post Hoc Analysis for Demographic Variables and Shopping Behaviour

Shopper Variable	**Age Groups**		**Mean Difference**	**Sig.**
Q5NB	18 to 24	45 to 54	0.595	0.028*
Q5NB	18 to 24	55 to 64	0.819	0.003**
Q5LE	18 to 24	25 to 34	-0.453	0.028*
Q5LE	18 to 24	35 to 44	-0.525	0.045*
Q5SF	Not statistically significant			
Q6TR	18 to 24	25 to 34	0.525	0.002**
Q6TR	18 to 24	35 to 44	0.622	0.004**
Q6TR	18 to 24	45 to 54	0.697	0.003**
Q6TR	18 to 24	55 to 64	1.049	0.000***
Q6DH	18 to 24	25 to 34	0.500	0.009**
Q6CB	Not statistically significant			
Q6FT	18 to 24	35 to 44	-0.526	0.026*
Q7RW	18 to 24	35 to 44	0.523	0.035*
Q7RW	18 to 24	45 to 54	0.676	0.006**
Q7RW	18 to 24	55 to 64	1.095	0.000***
Q7RW	18 to 24	65 +	1.129	0.026*
Q7RW	25 to 34	55 to 64	0.786	0.001***
Q7MS	Not statistically significant			
Q7NT	18 to 24	35 to 44	0.594	0.012*
Q7NT	18 to 24	45 to 54	0.805	0.001***
Q7NT	18 to 24	55 to 64	0.851	0.002**
Q7NT	25 to 34	35 to 44	0.492	0.022*
Q7NT	25 to 34	45 to 54	0.702	0.001***
Q7NT	25 to 34	55 to 64	0.748	0.004**
Q7BB	18 to 24	55 to 64	0.690	0.016*
Q7BB	25 to 34	45 to 54	0.497	0.044*
Q7LT	18 to 24	25 to 34	0.421	0.022*
Q7LT	18 to 24	35 to 44	0.631	0.002**
Q7LT	18 to 24	45 to 54	0.638	0.005**
Q7SW	18 to 24	45 to 54	0.662	0.001***
Q7SW	18 to 24	55 to 64	0.571	0.017*
Q7SW	25 to 34	45 to 54	0.580	0.001***
Q7SW	25 to 34	55 to 64	0.488	0.033*
Q7MO	Not statistically significant			
Shopper Variable	**Education Level Groups**		**Mean Difference**	**Sig.**
Q5CC	University graduates	University post-graduates	0.367	0.010**
Q6VI	Sixth form college	University graduates	0.353	0.013*
Q6VI	Sixth form college	University post-graduates	0.323	0.022*
Shopper Variable	**Household Income Groups**		**Mean Difference**	**Sig.**
Q5CC	£10,000 to £20,000 p.a.	£100,000 p.a.+	0.952	0.02*
Q6RF	£10,000 to £20,000 p.a.	£70,000 to £100,000 p.a.	0.654	0.033*
Q6UP	Not statistically significant			
*p<0.05, **p<0.01, ***p<0.001				

10.5.4.4 Fashion Shopping Behaviour Graphs and Charts

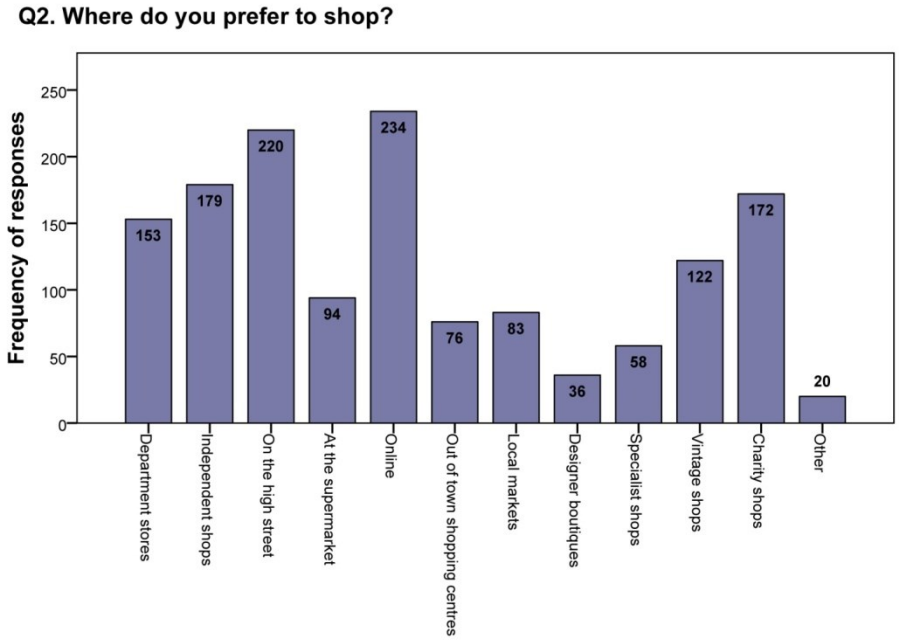


Figure 92. Q2. Where do you prefer to shop?

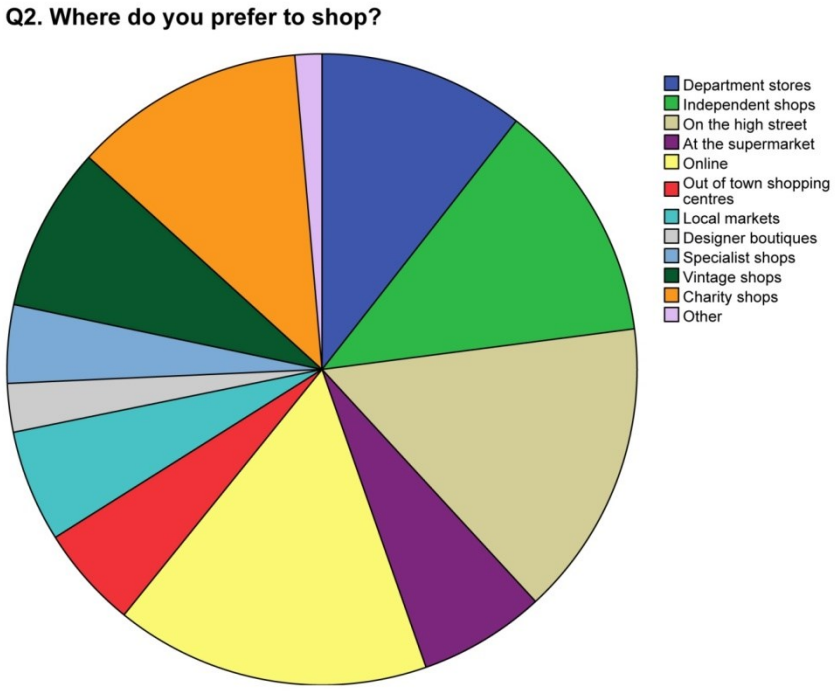


Figure 93. Q2. Where do you prefer to shop?

Q5. When I am shopping for clothes...

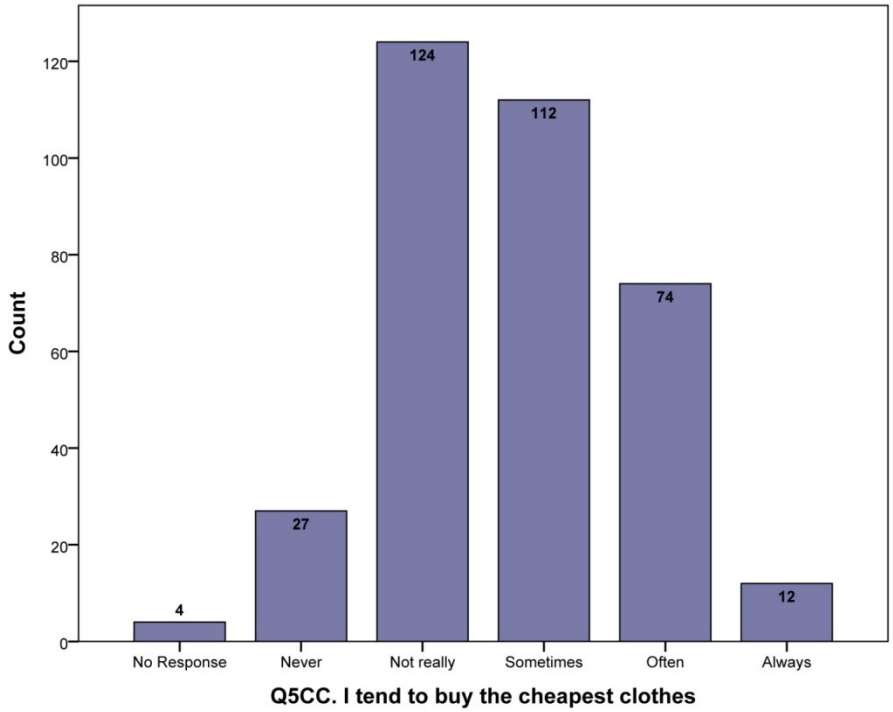


Figure 94. Q5CC. I tend to buy the cheapest clothes

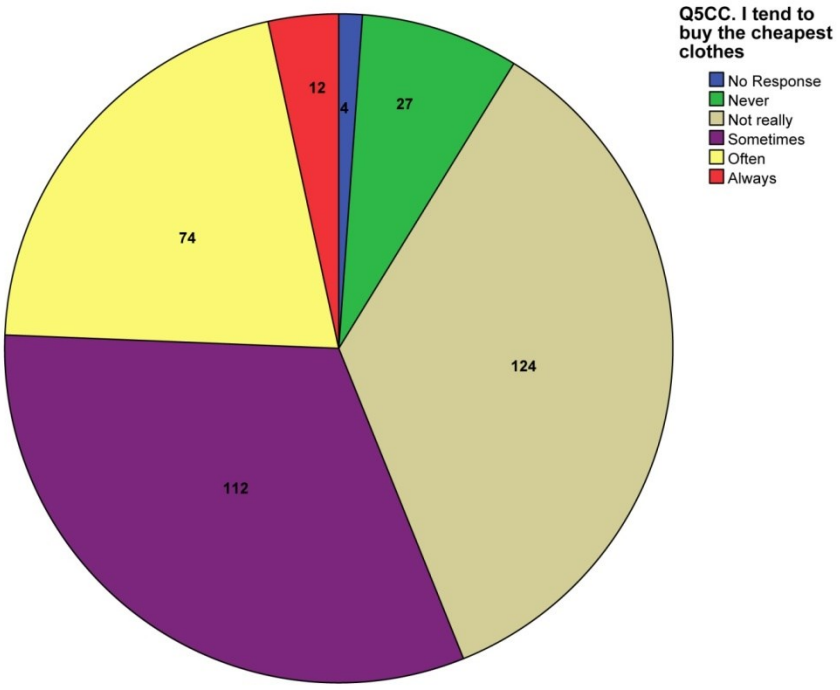


Figure 95. Q5CC. I tend to buy the cheapest clothes

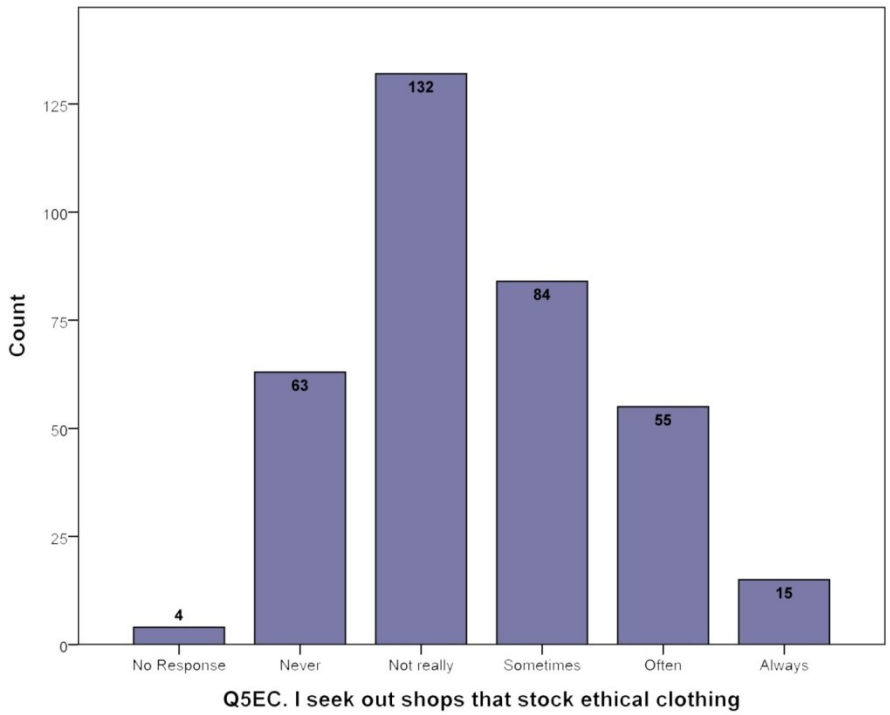


Figure 96. Q5EC. I seek out shops that stock ethical clothing

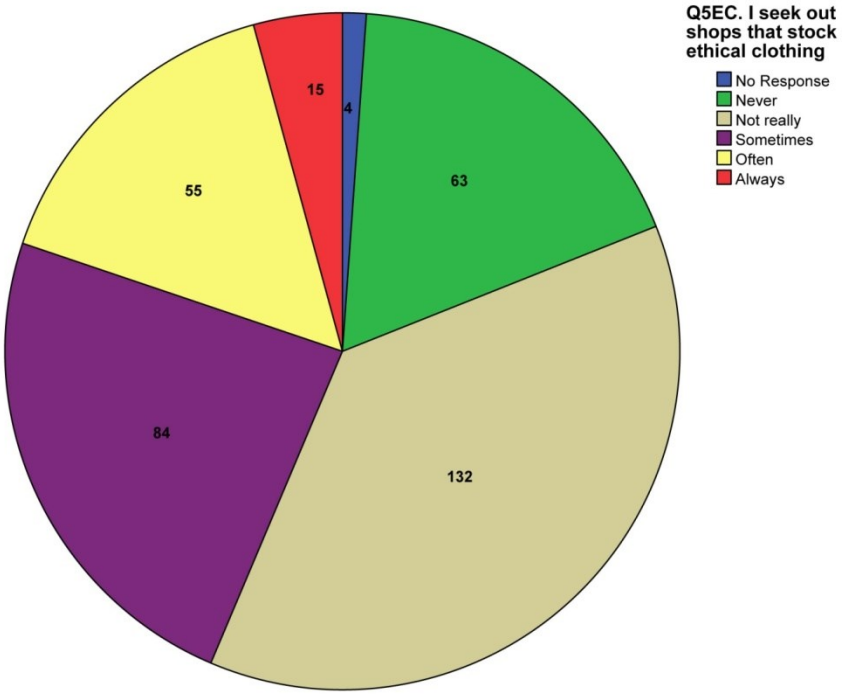


Figure 97. Q5EC. I seek out shops that stock ethical clothing

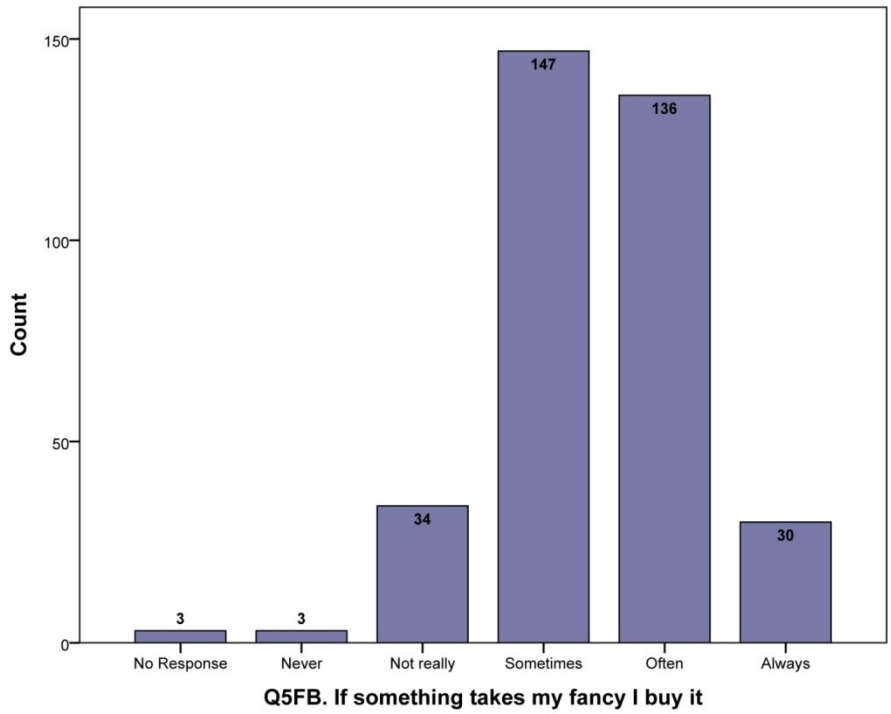


Figure 98. Q5FB. If something takes my fancy I buy it

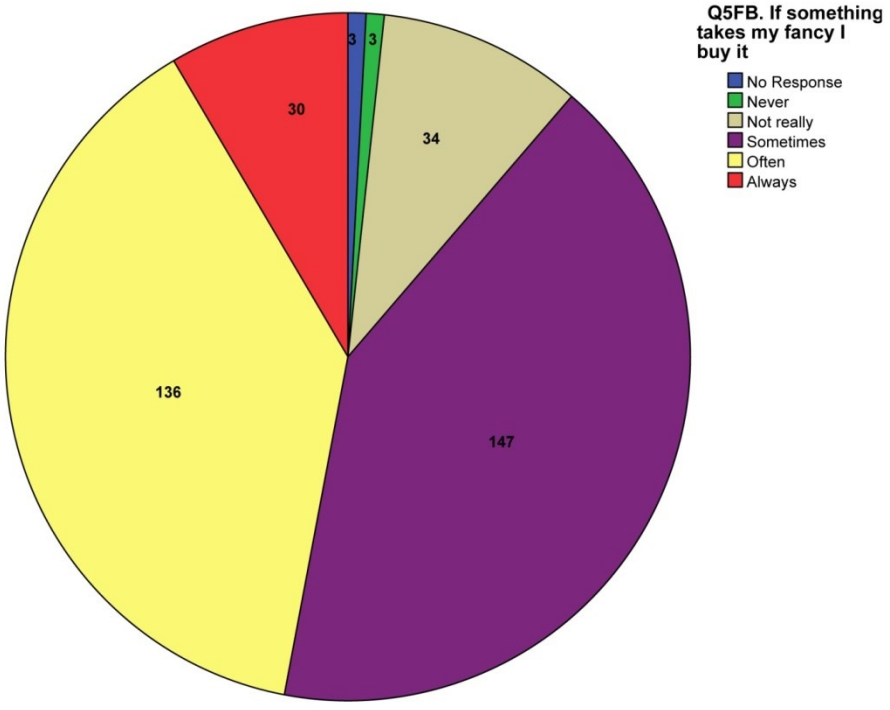


Figure 99. Q5FB. If something takes my fancy I buy it

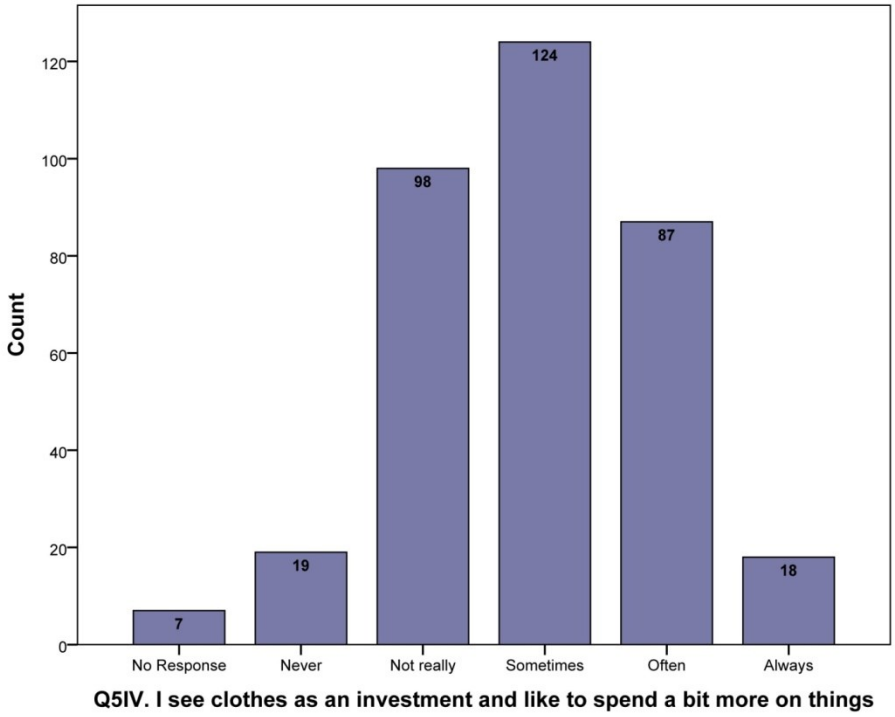


Figure 100. Q5IV. I see clothes as an investment and like to spend a bit more on things

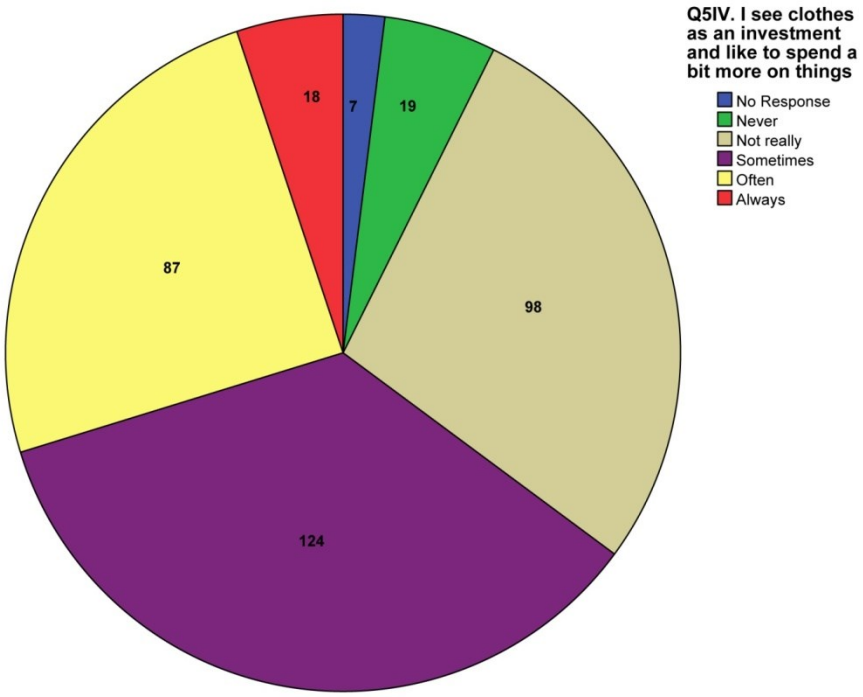


Figure 101. Q5IV. I see clothes as an investment and like to spend a bit more on things

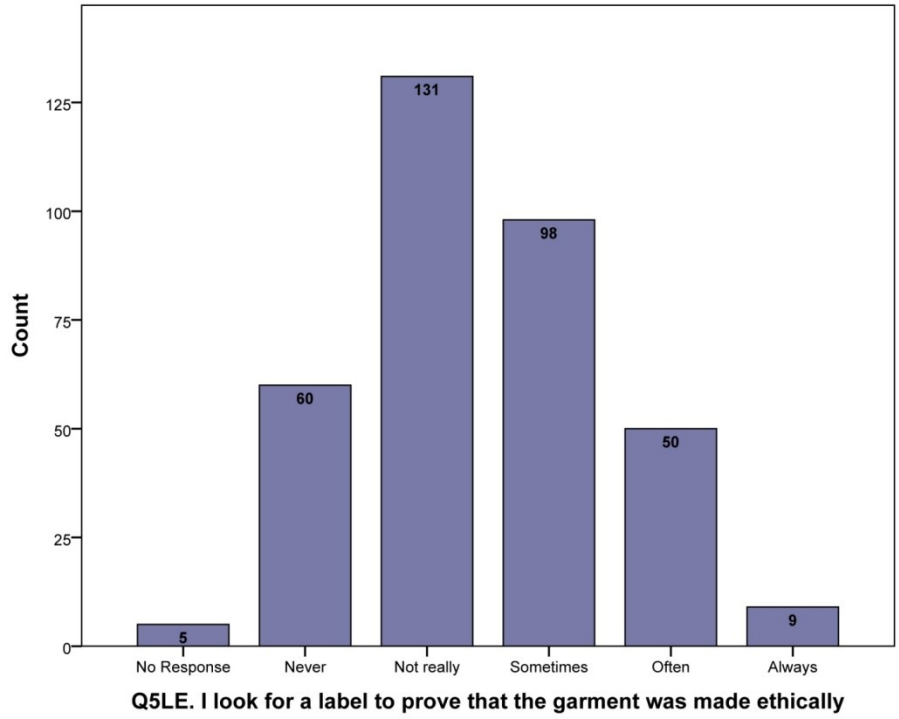


Figure 102. Q5LE. I look for a label to prove that the garment was made ethically

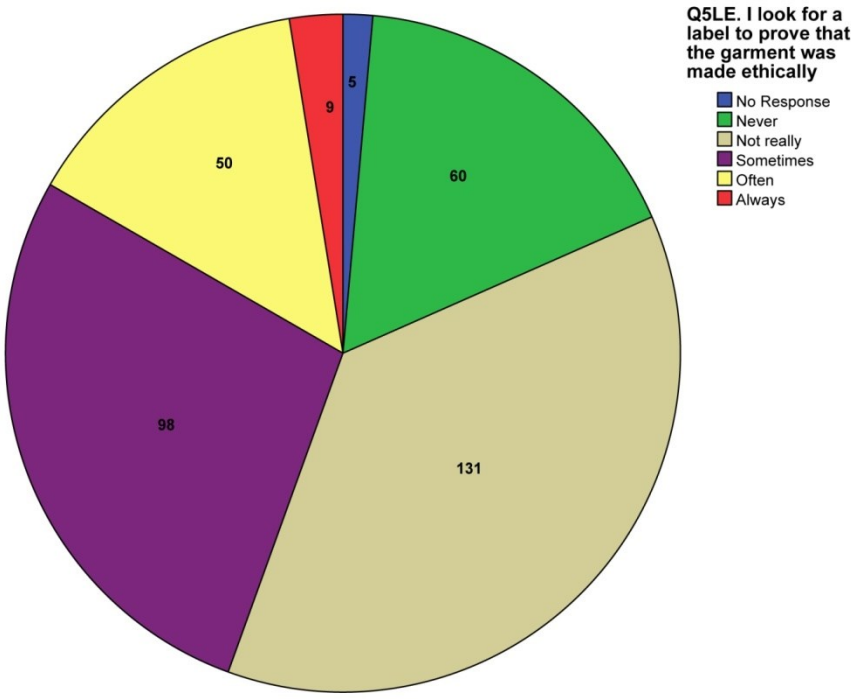


Figure 103. Q5LE. I look for a label to prove that the garment was made ethically

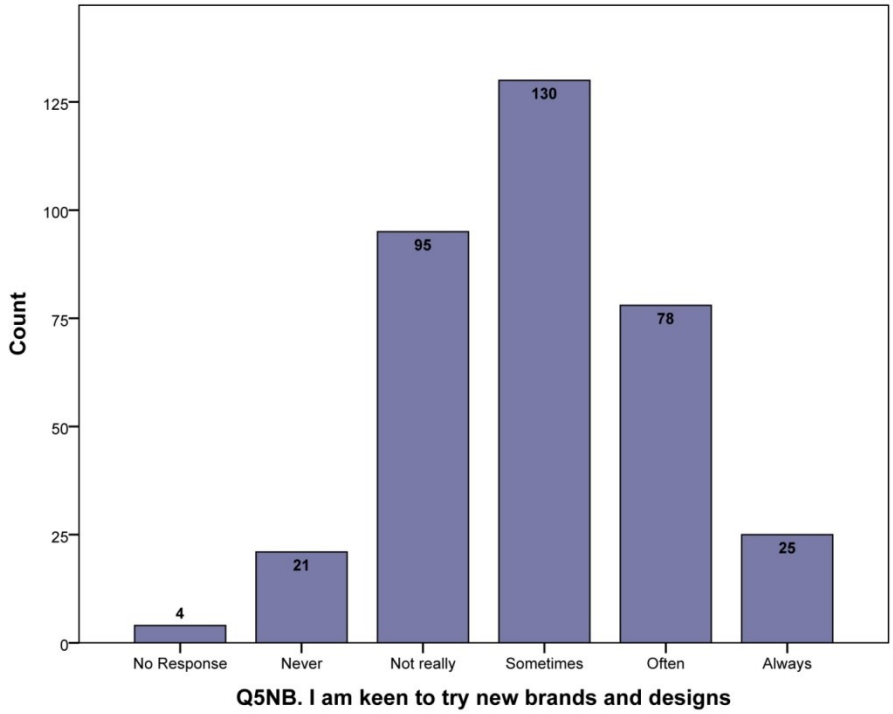


Figure 104. Q5NB. I am keen to try new brands and designs

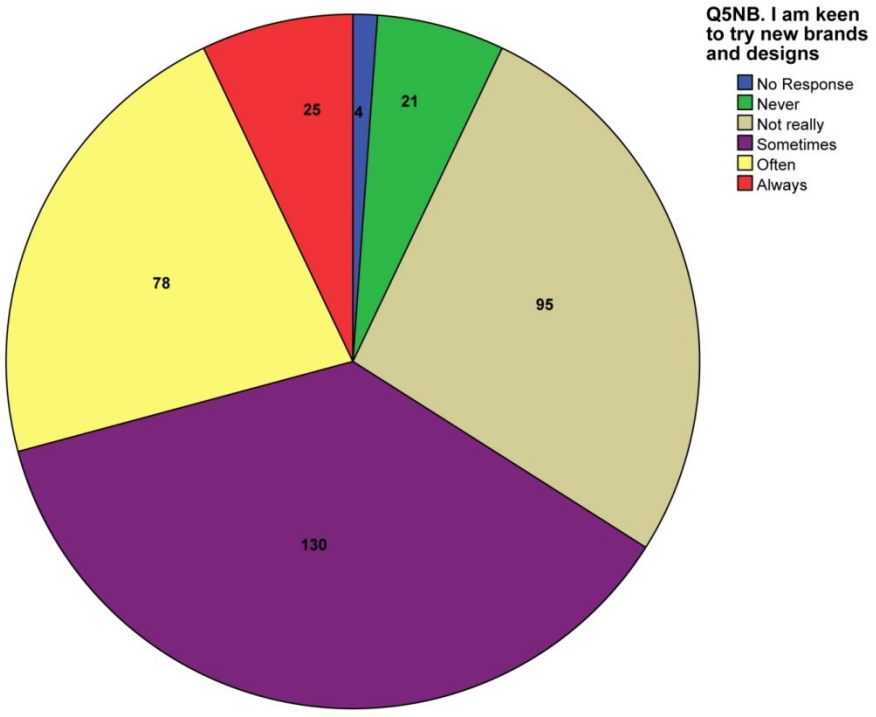


Figure 105. Q5NB. I am keen to try new brands and designs

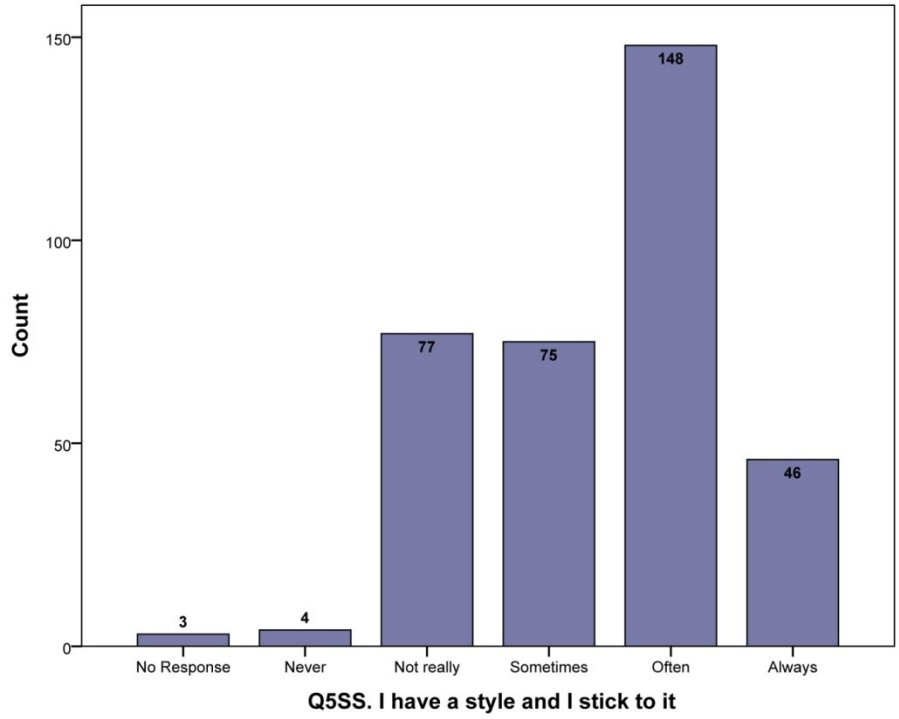


Figure 106. Q5SS. I have a style and I stick to it

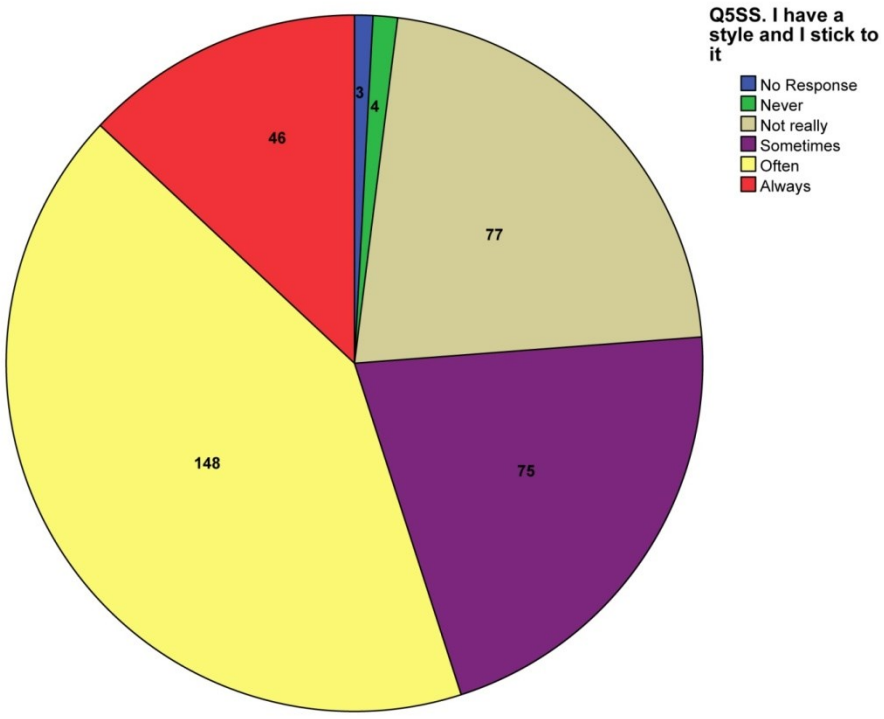


Figure 107. Q5SS. I have a style and I stick to it

Q6. When I am shopping for clothes I am looking for...

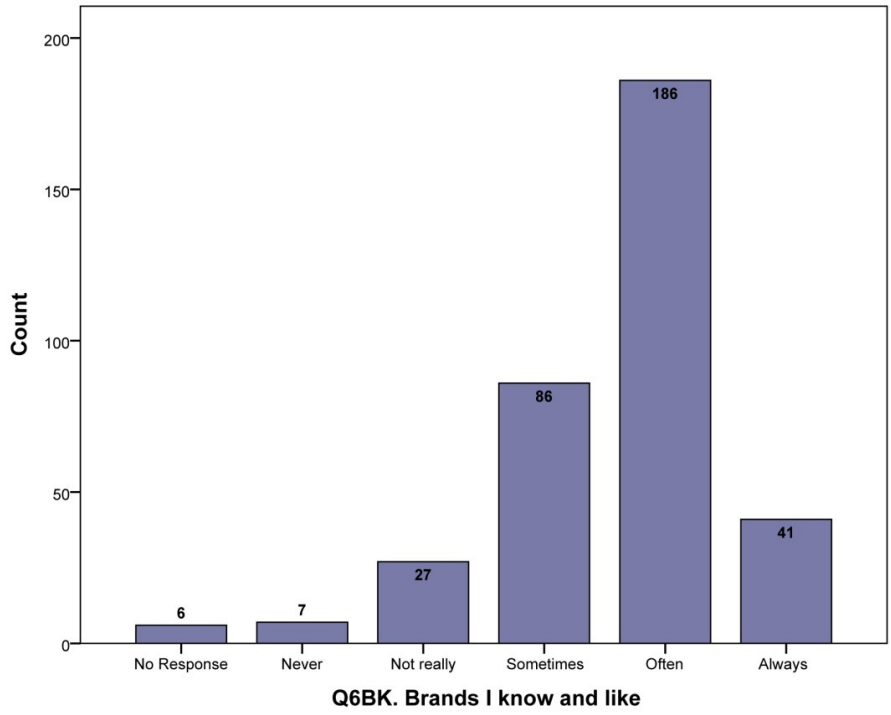


Figure 108. Q6BK. Brands I know and like

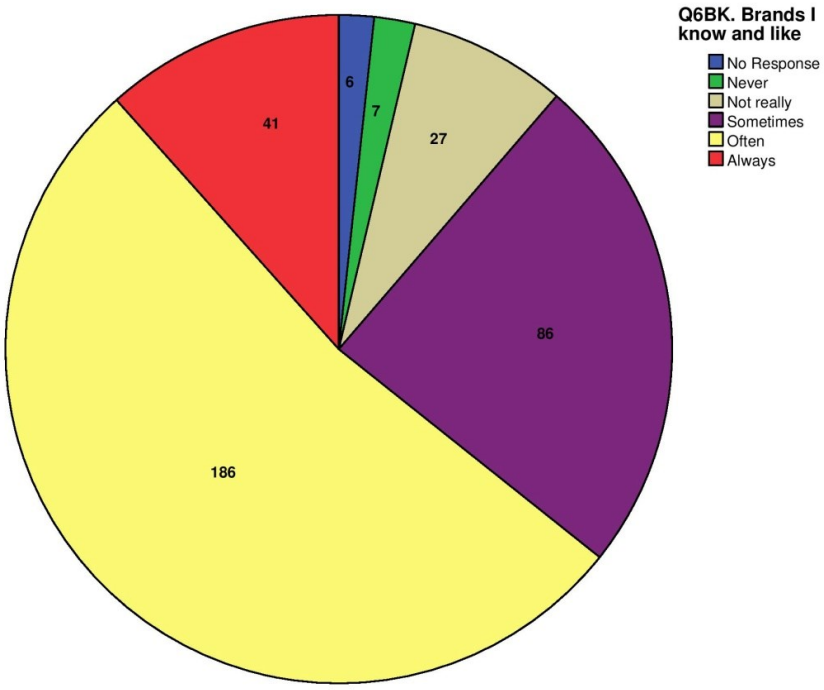


Figure 109. Q6BK. Brands I know and like

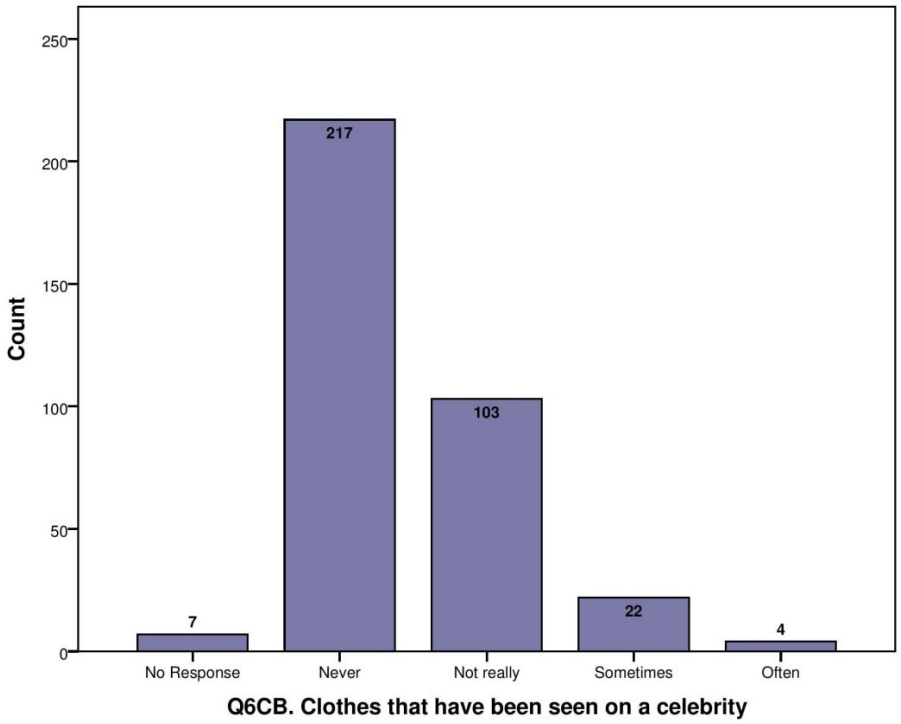


Figure 110. Q6CB Clothes that have been seen on a celebrity

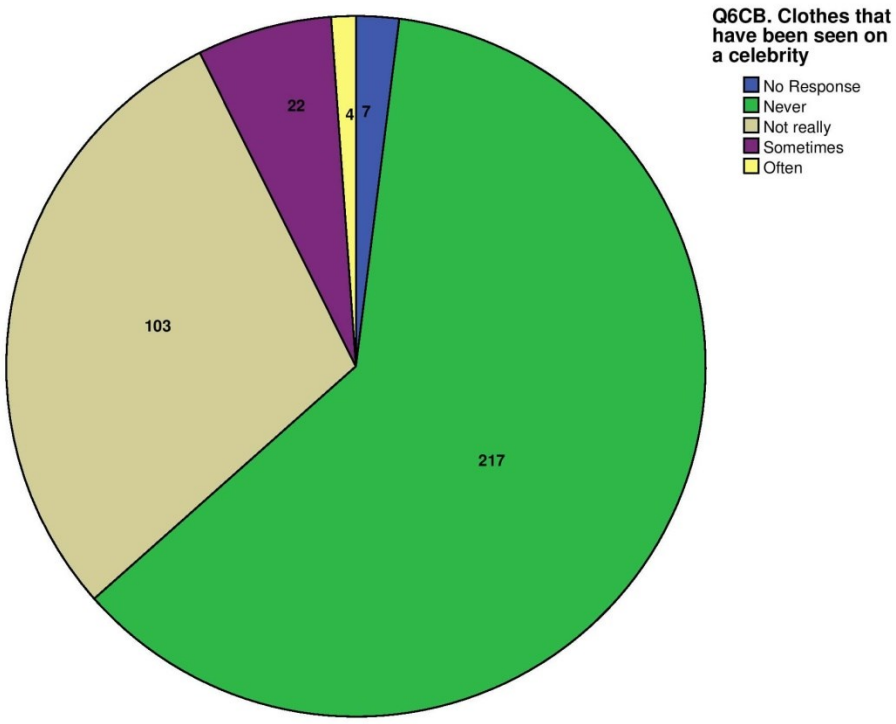


Figure 111. Q6CB Clothes that have been seen on a celebrity

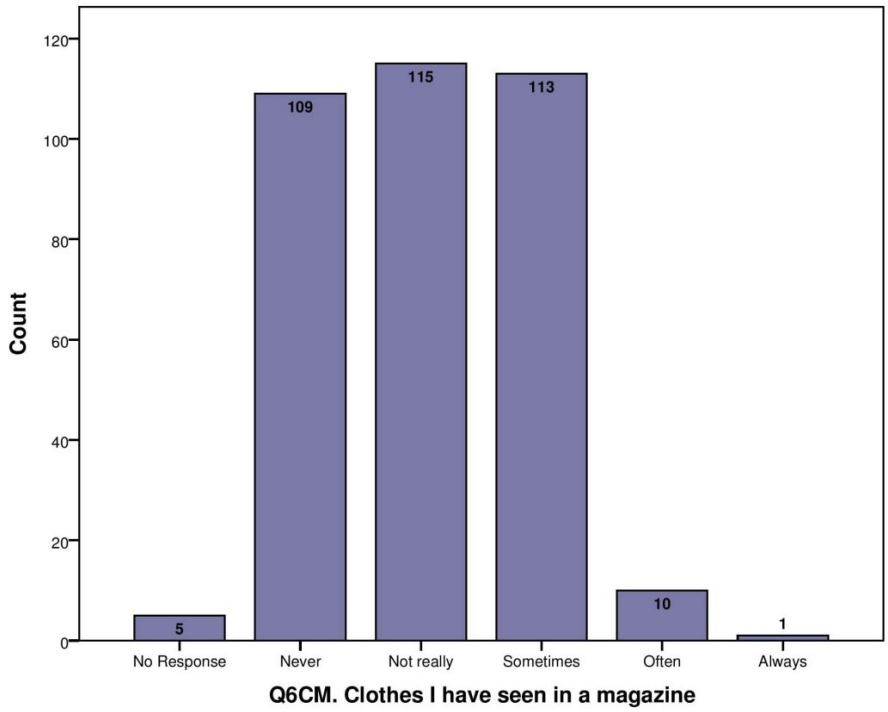


Figure 112. Q6CM. Clothes I have seen in a magazine

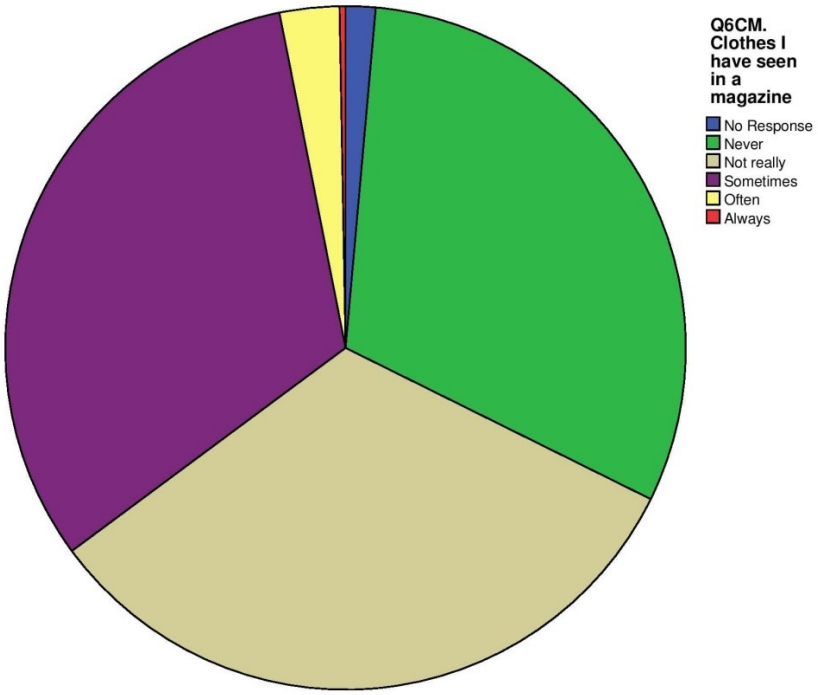


Figure 113. Q6CM. Clothes I have seen in a magazine

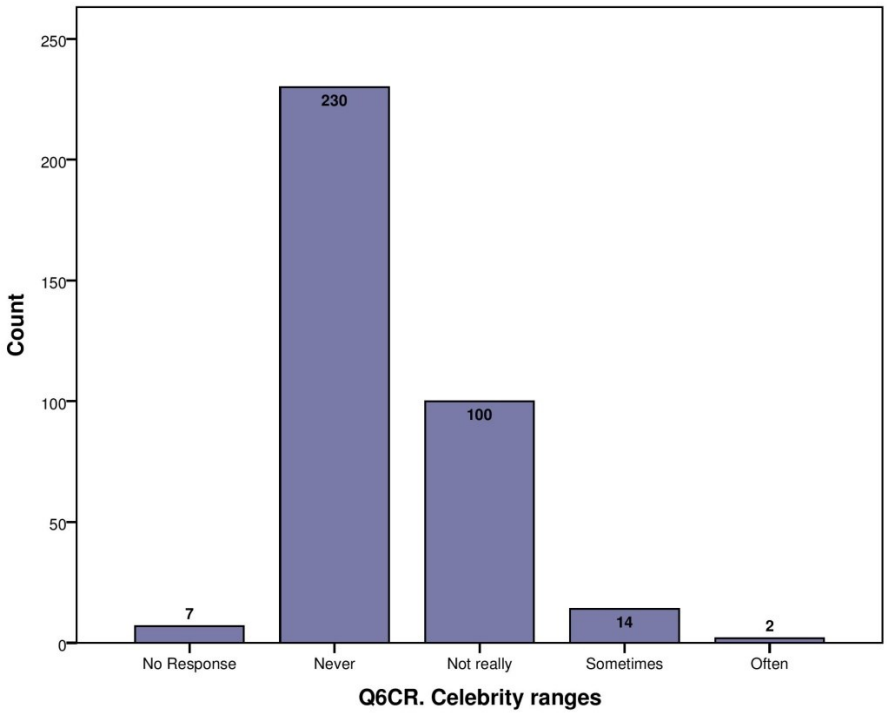


Figure 114. Q6CR. Celebrity ranges

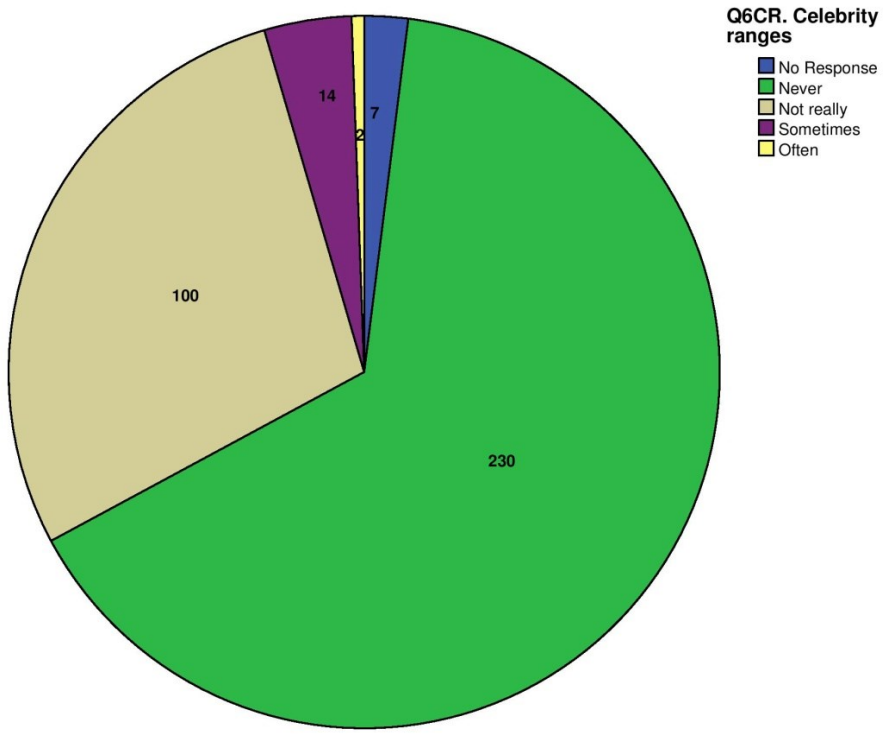


Figure 115. Q6CR. Celebrity ranges

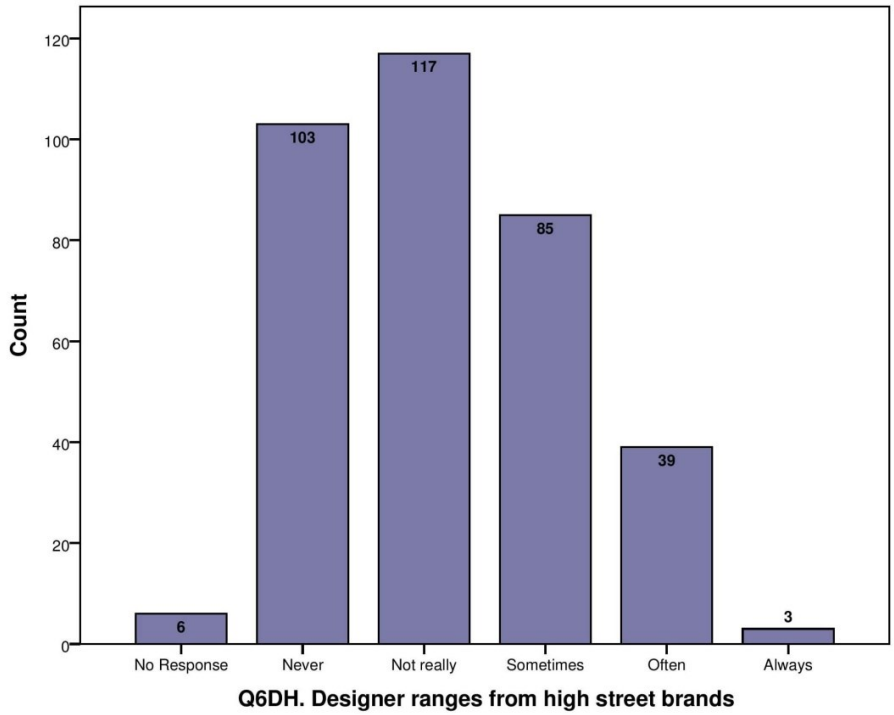


Figure 116. Q6DH. Designer ranges from high street brands

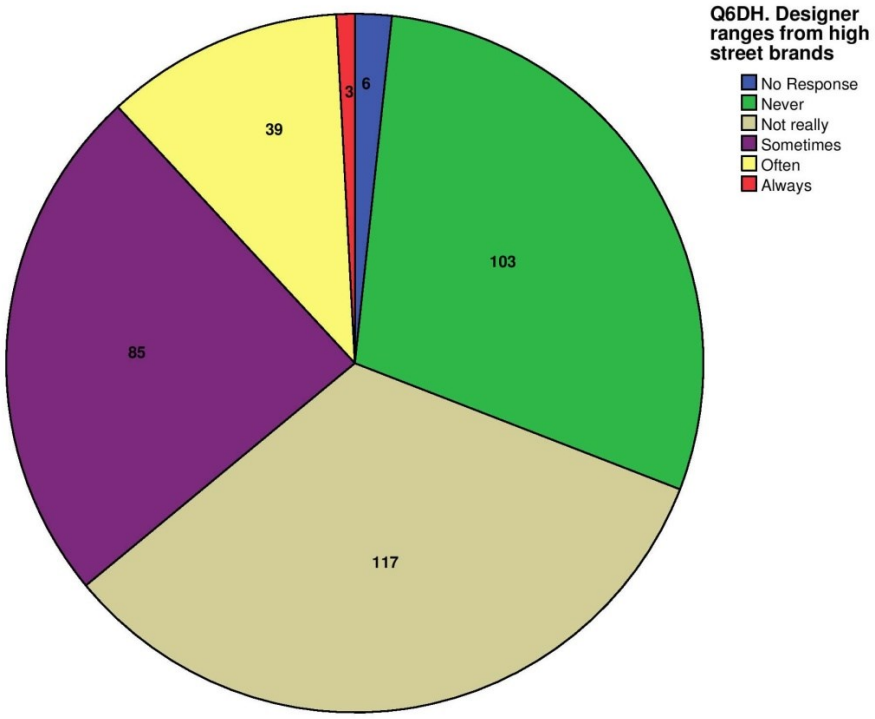


Figure 117. Q6DH. Designer ranges from high street brands

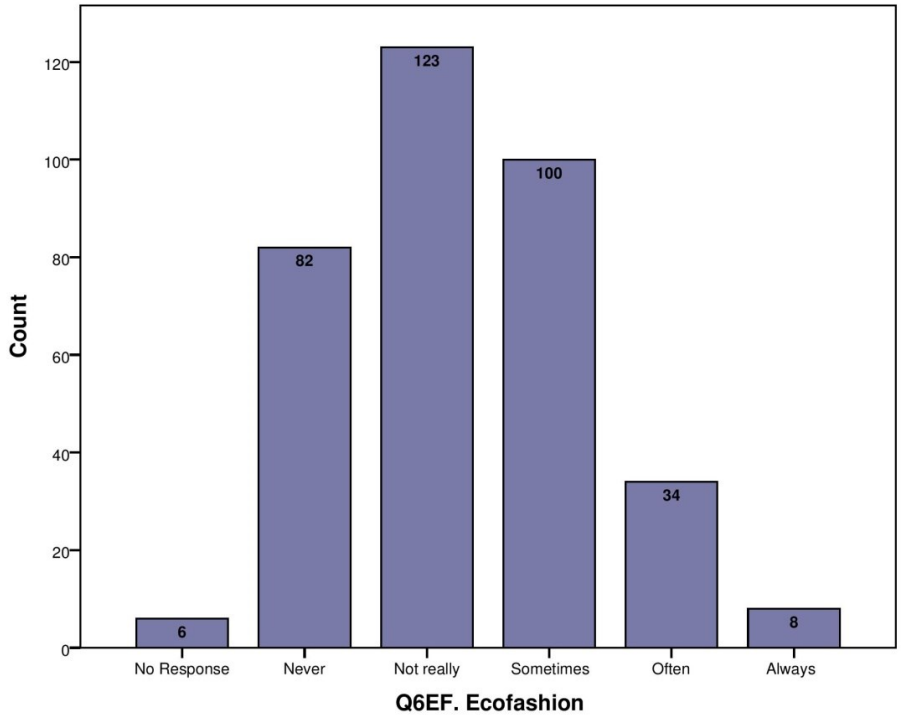


Figure 118. Q6EF. Ecofashion

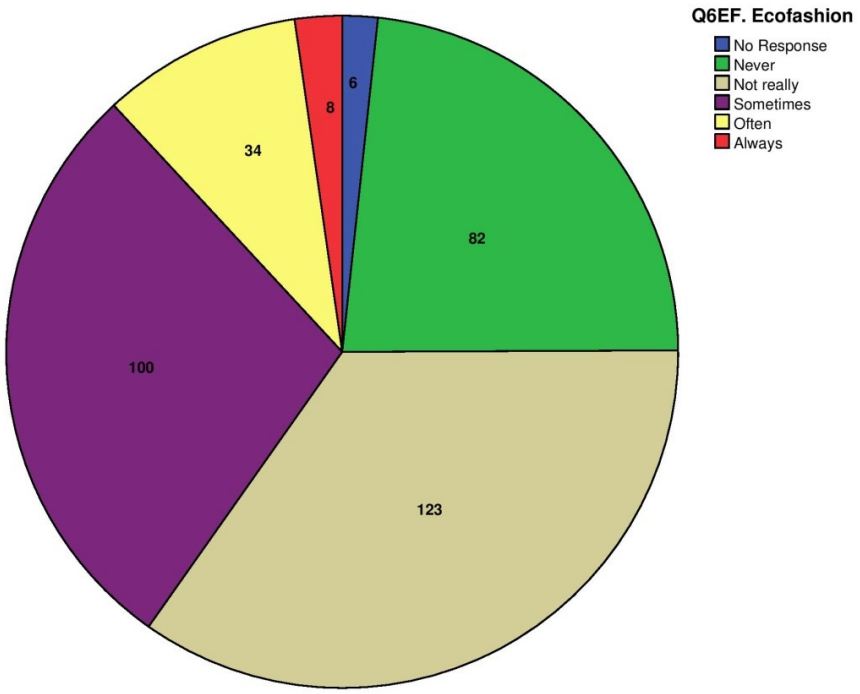


Figure 119. Q6EF. Ecofashion

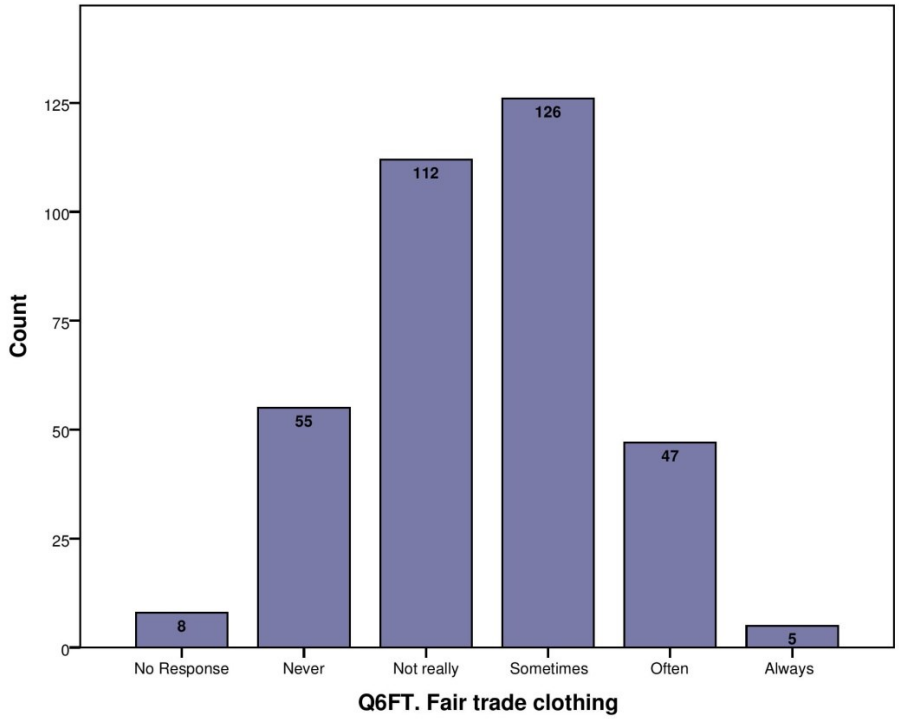


Figure 120. Q6FT. Fair trade clothing

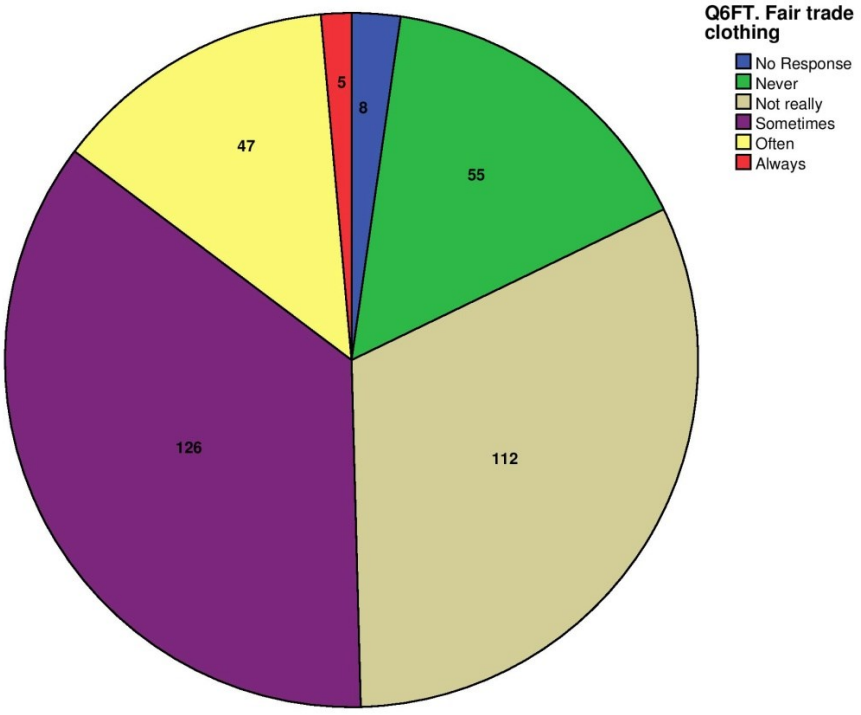


Figure 121. Q6FT. Fair trade clothing

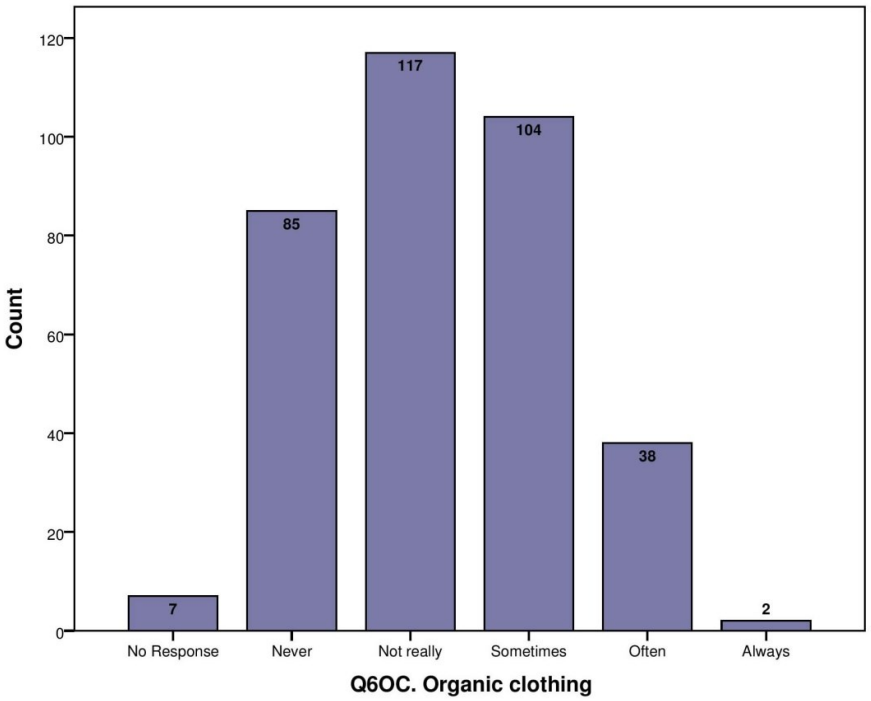


Figure 122. Q6OC. Organic clothing

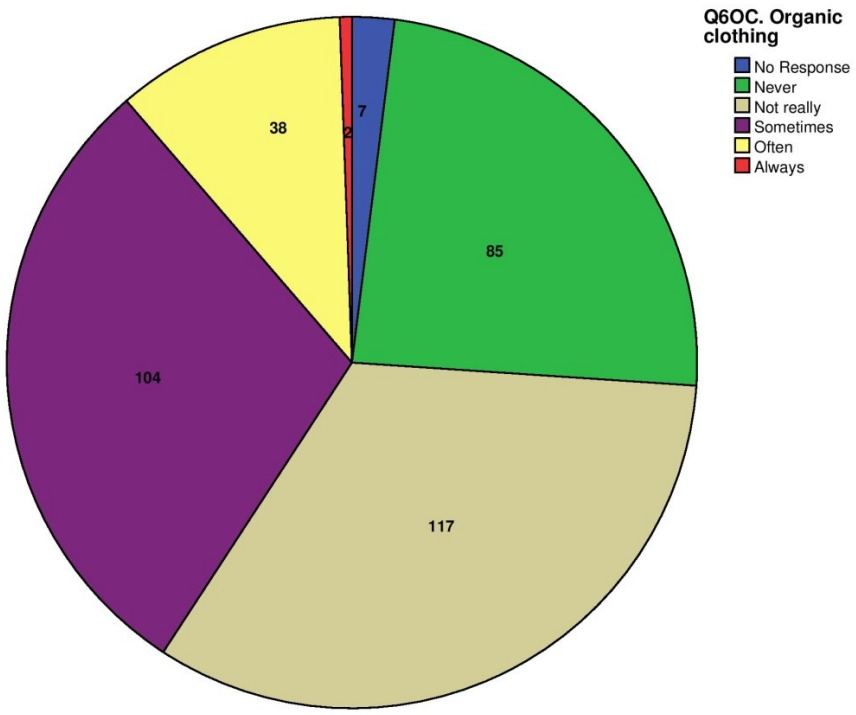


Figure 123. Q6OC. Organic clothing

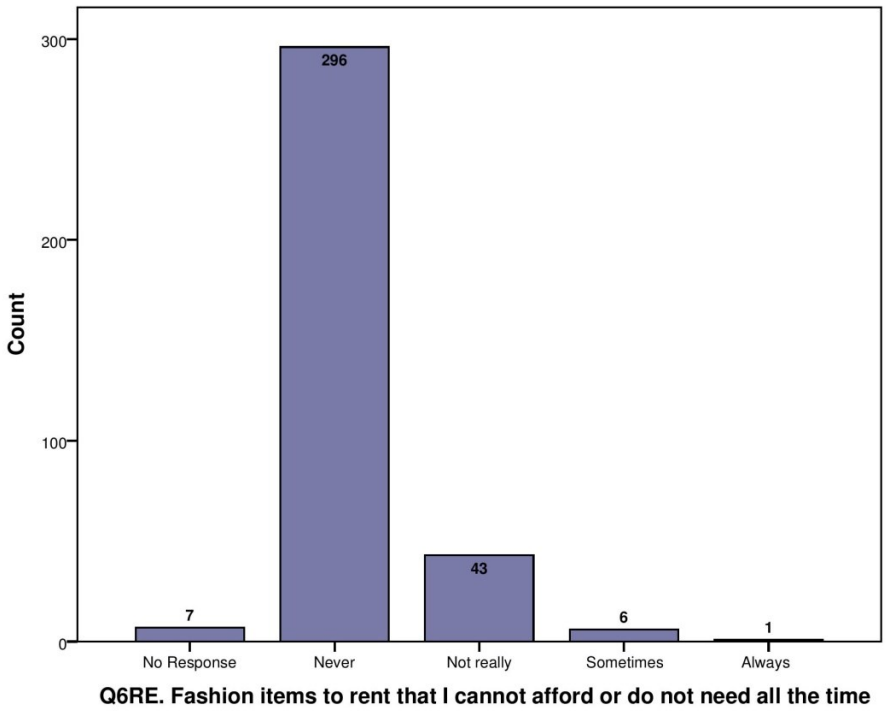


Figure 124. Q6RE. Fashion items to rent that I cannot afford or do not need all the time

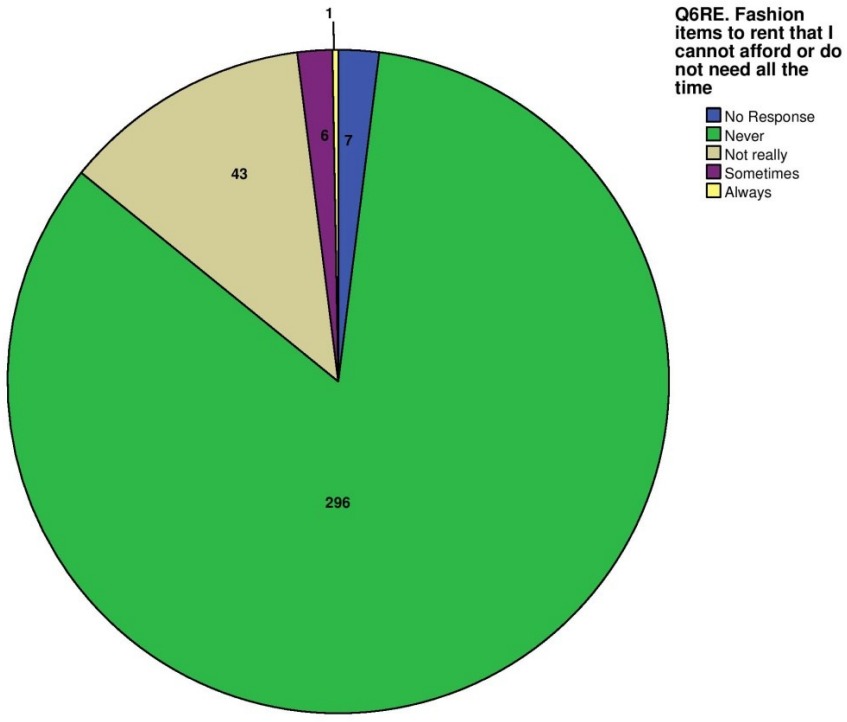


Figure 125. Q6RE. Fashion items to rent that I cannot afford or do not need all the time

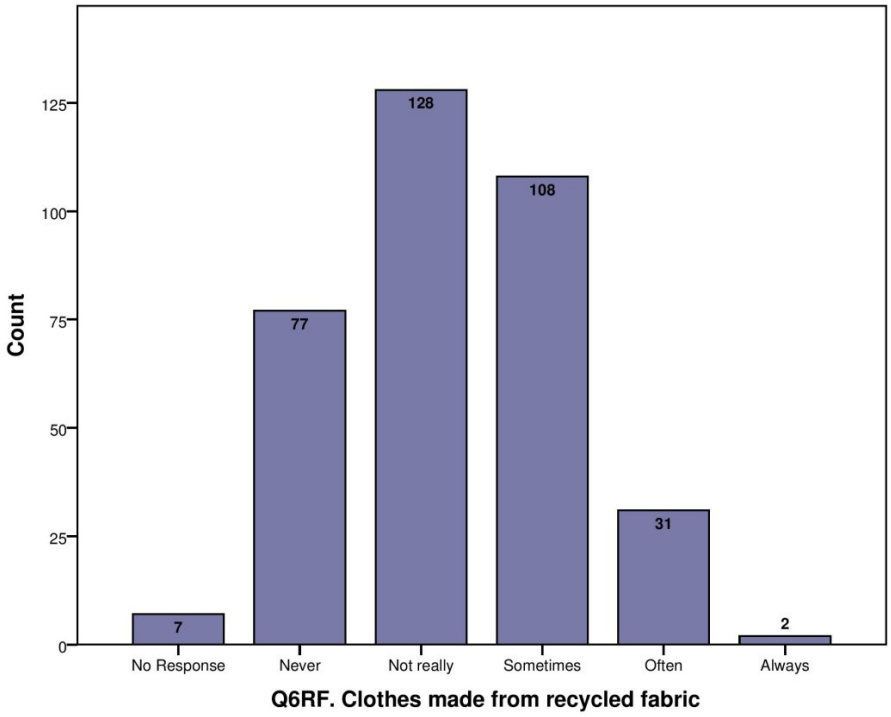


Figure 126. Q6RF. Clothes made from recycled fabric

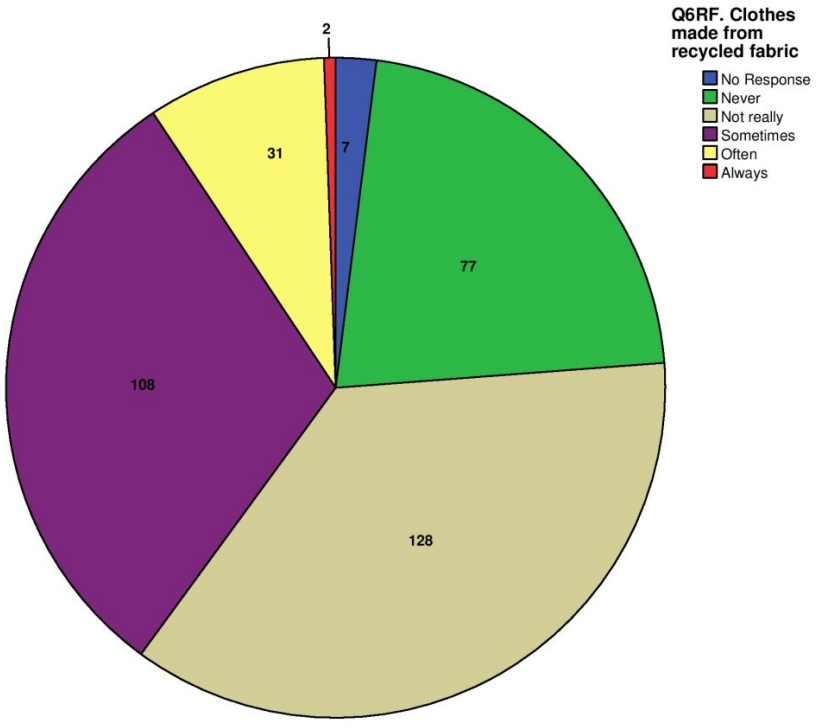


Figure 127. Q6RF. Clothes made from recycled fabric

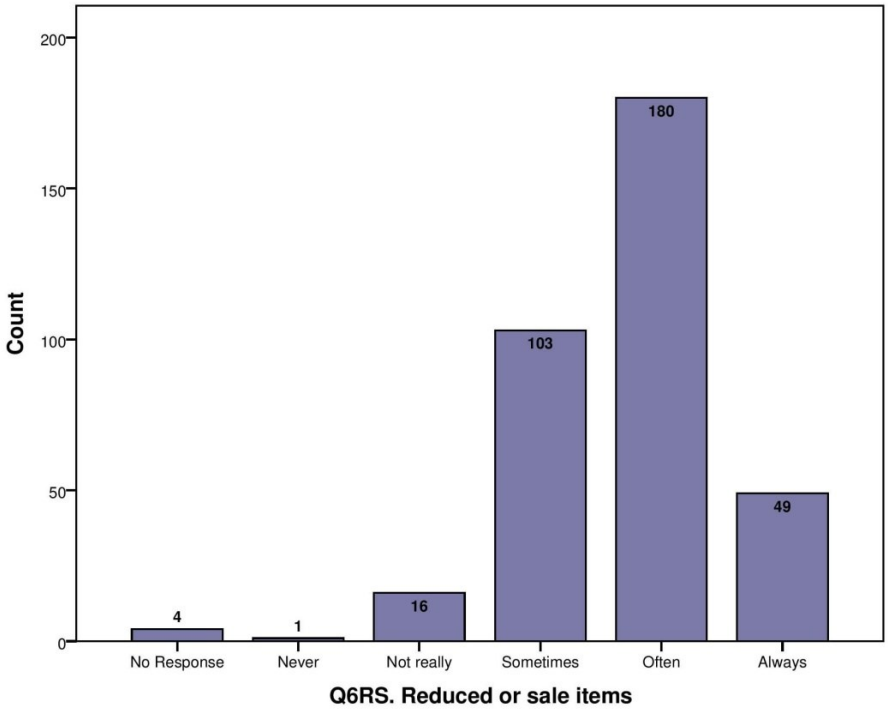


Figure 128. Q6RS. Reduced or sale items

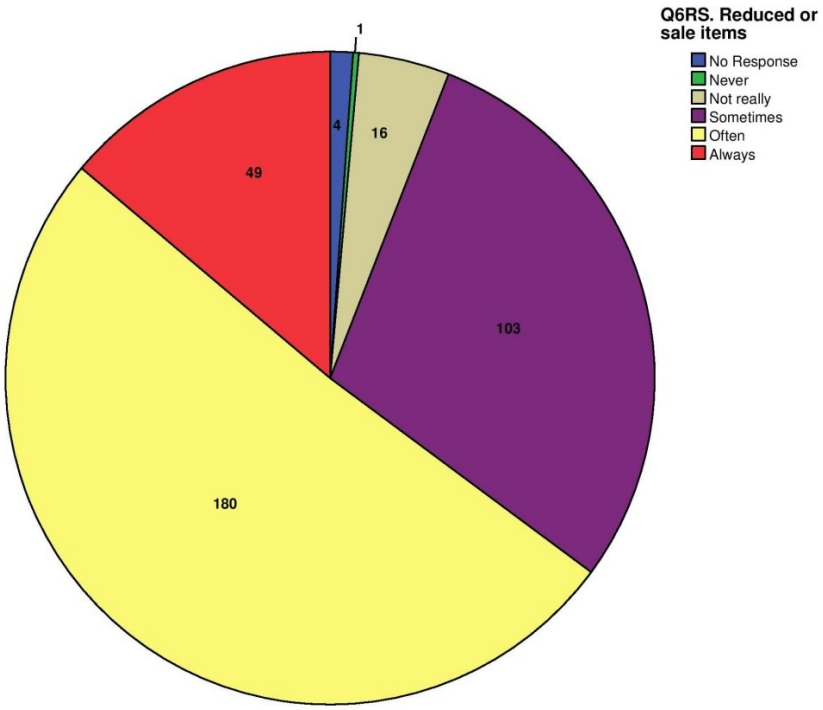


Figure 129. Q6RS. Reduced or sale items

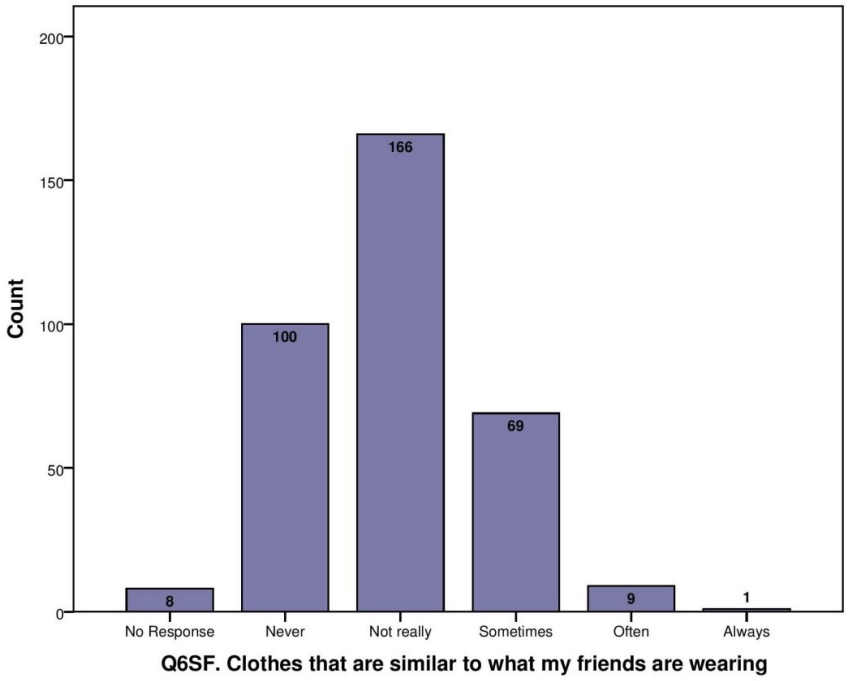


Figure 130. Q6SF. Clothes that are similar to what my friends are wearing

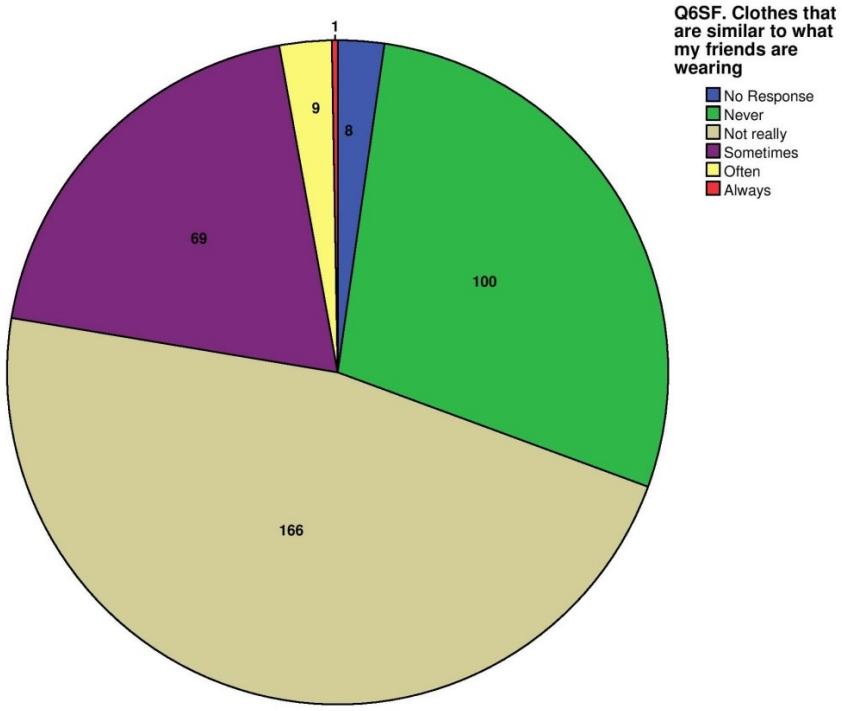


Figure 131. Q6SF. Clothes that are similar to what my friends are wearing

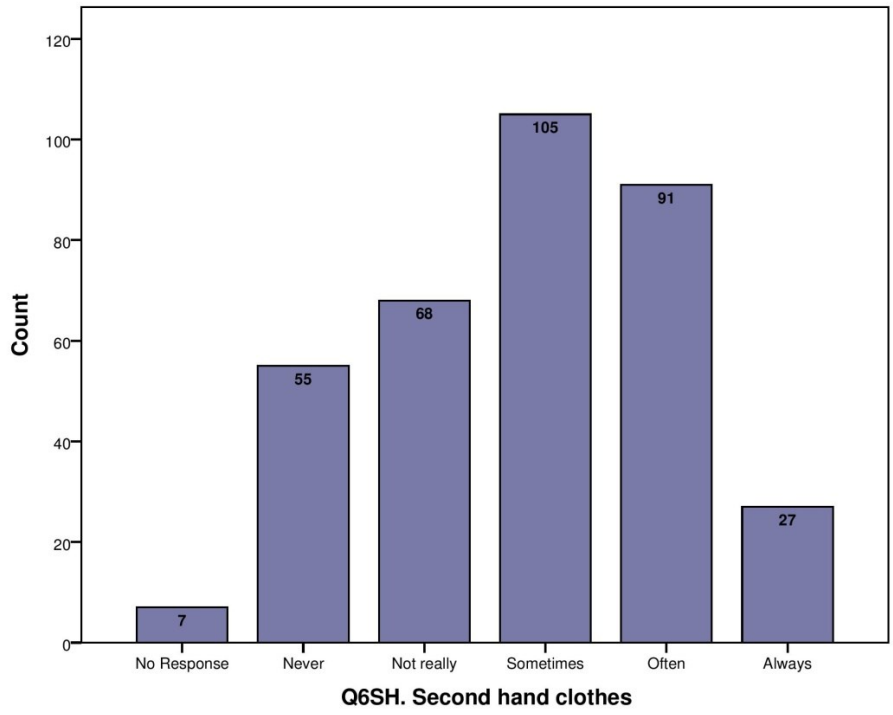


Figure 132. Q6SH. Second hand clothes

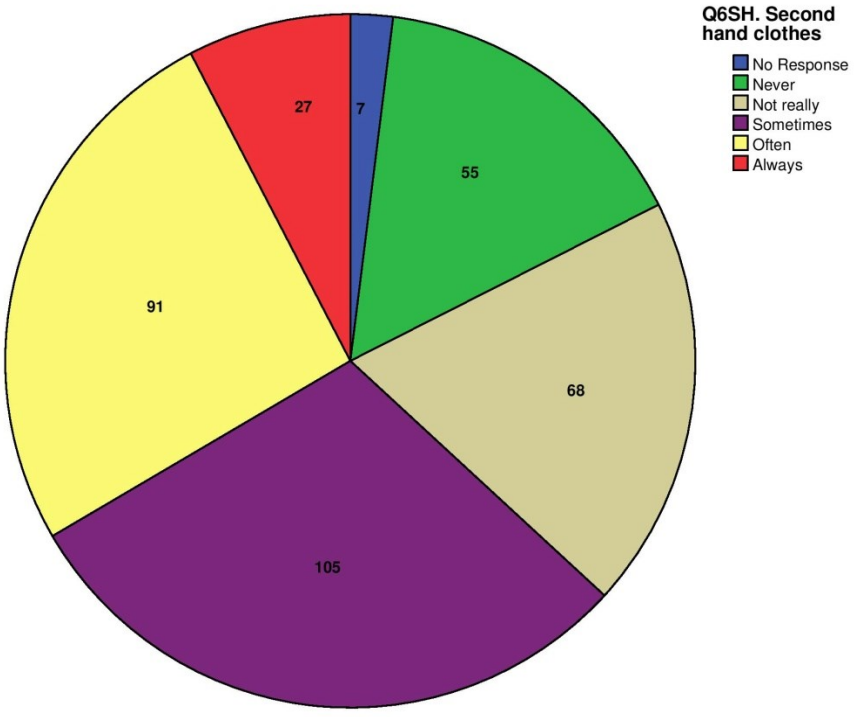


Figure 133. Q6SH. Second hand clothes

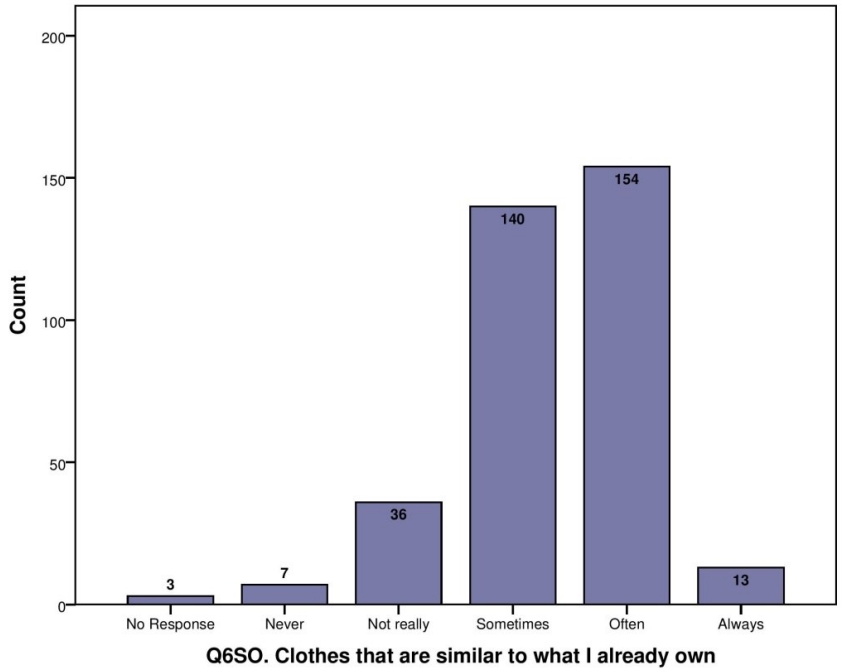


Figure 134. Q6SO. Clothes that are similar to what I already own

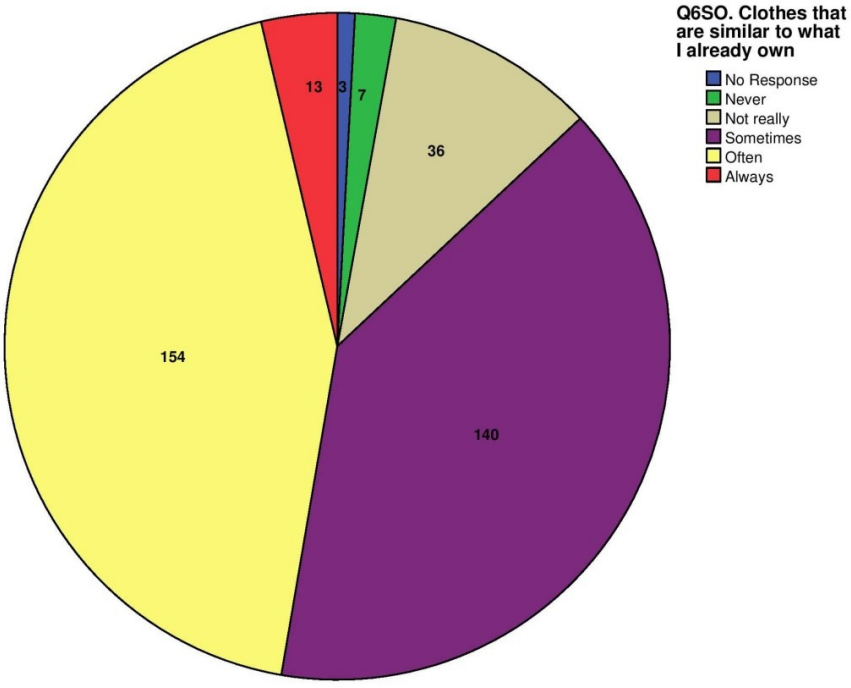


Figure 135. Q6SO. Clothes that are similar to what I already own

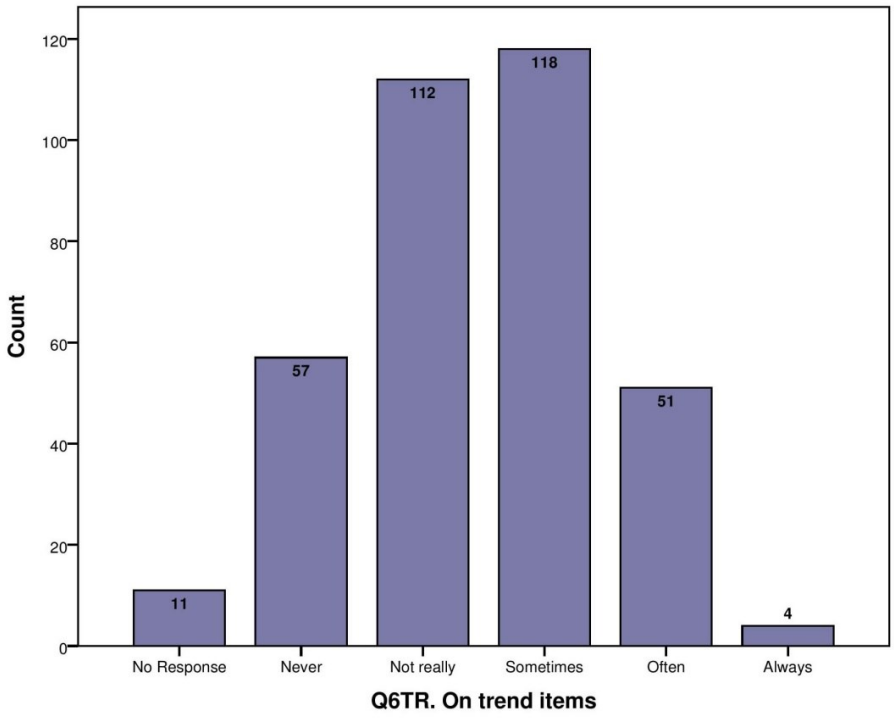


Figure 136. Q6TR. On trend items

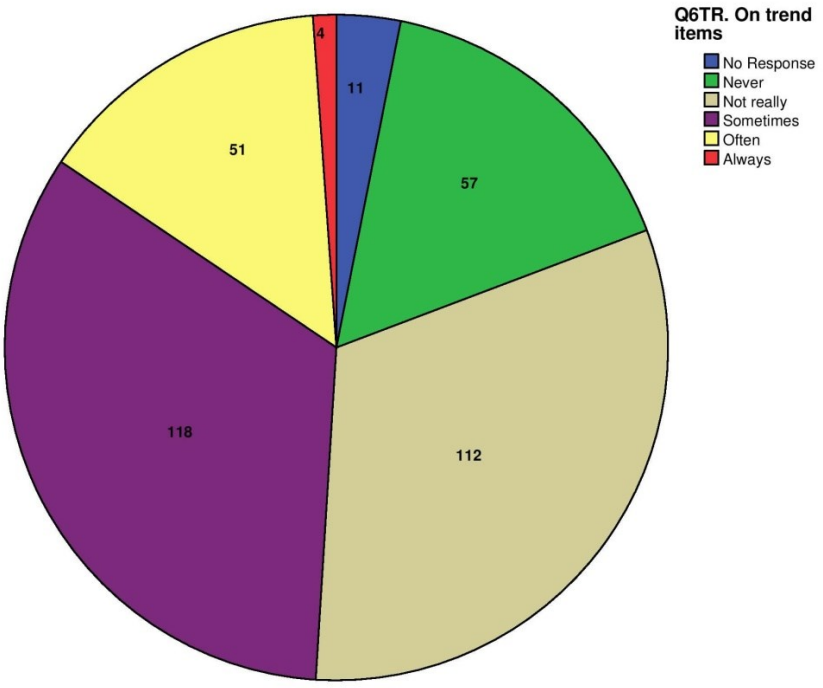


Figure 137. Q6TR. On trend items

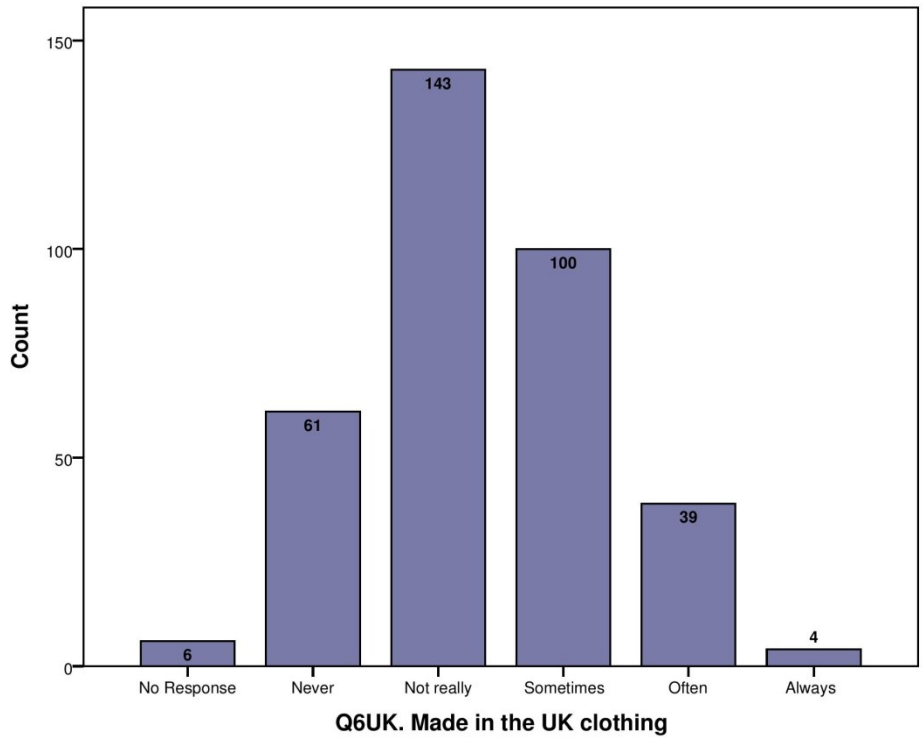


Figure 138. Q6UK. Made in the UK clothing

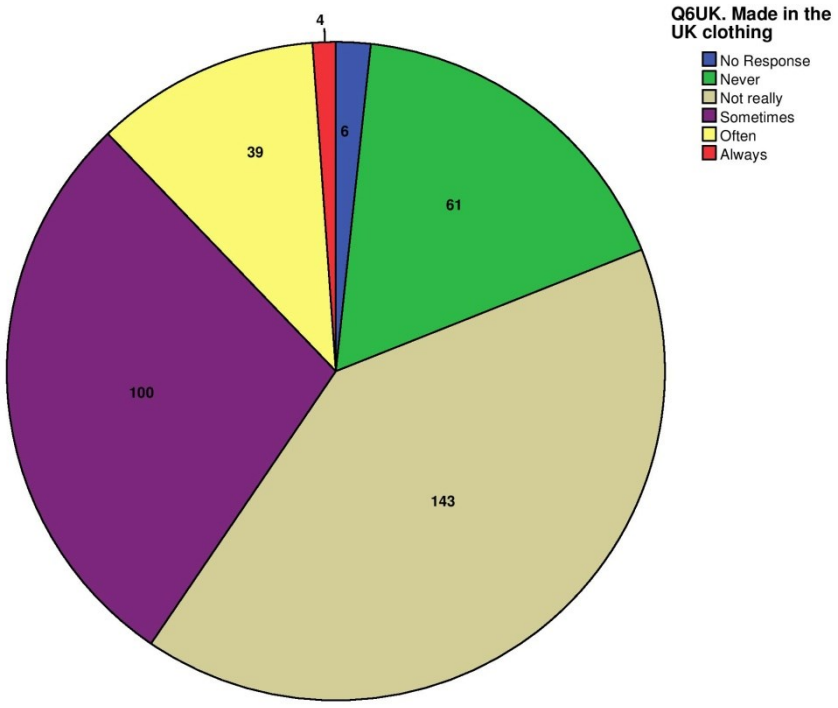


Figure 139. Q6UK. Made in the UK clothing

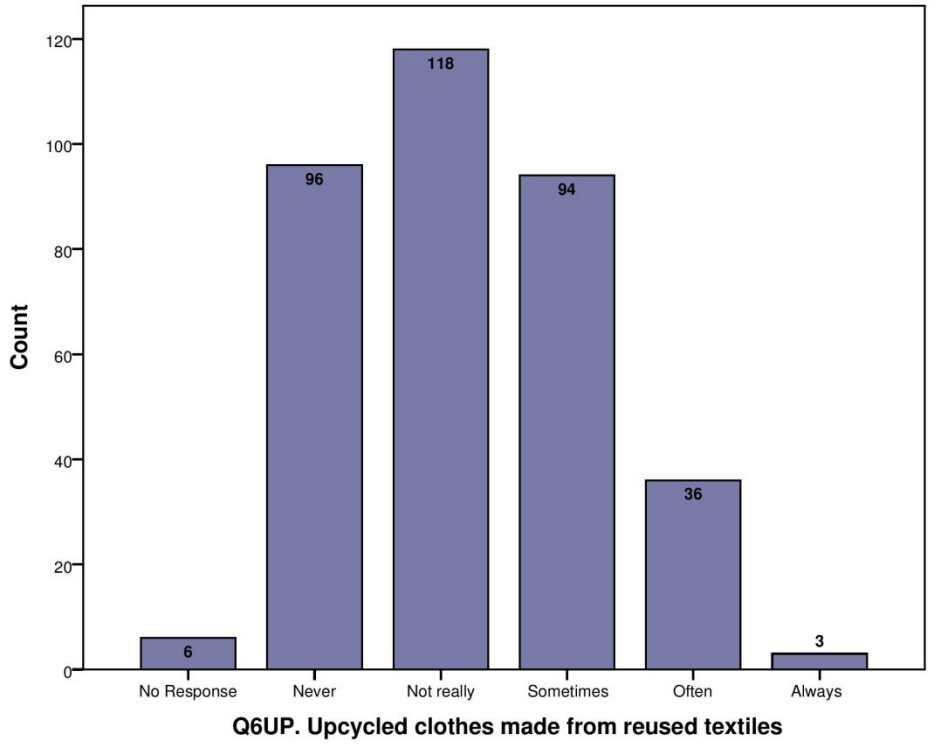


Figure 140. Q6UP. Upcycled clothes made from reused textiles

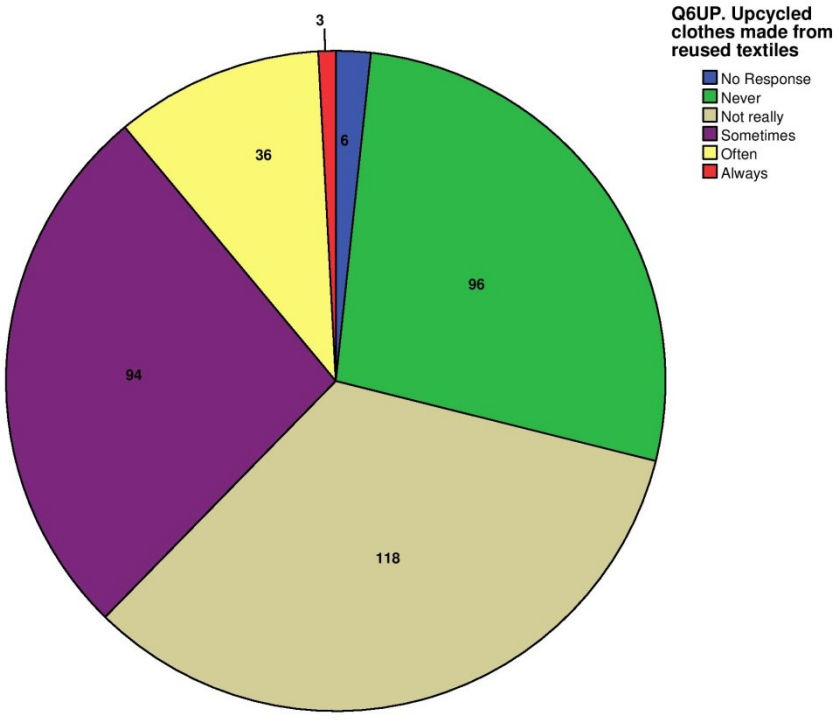


Figure 141. Q6UP. Upcycled clothes made from reused textiles

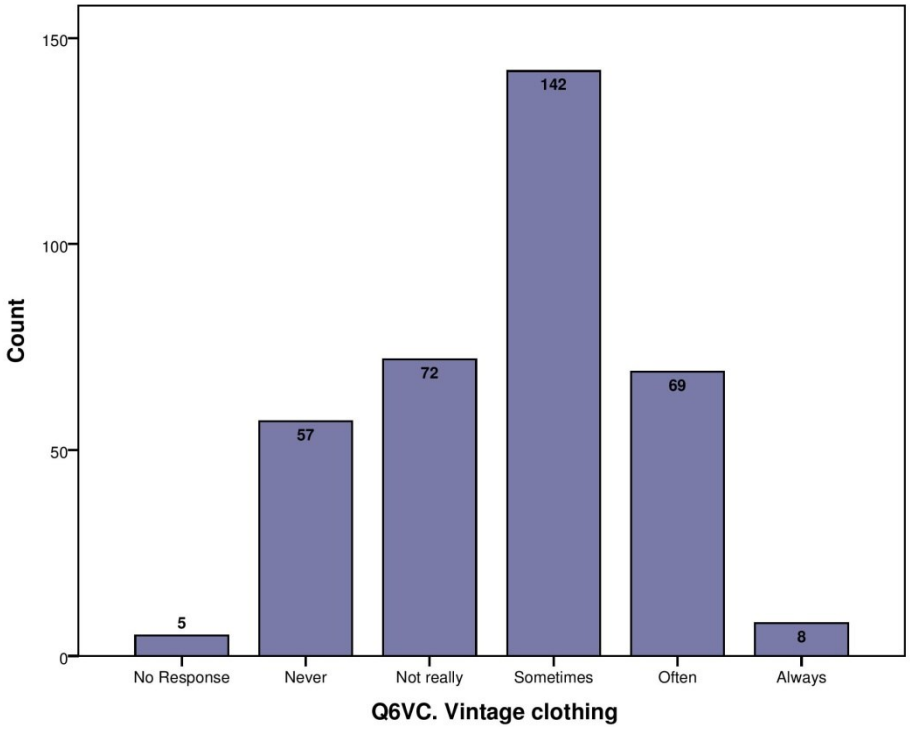


Figure 142. Q6VC. Vintage clothing

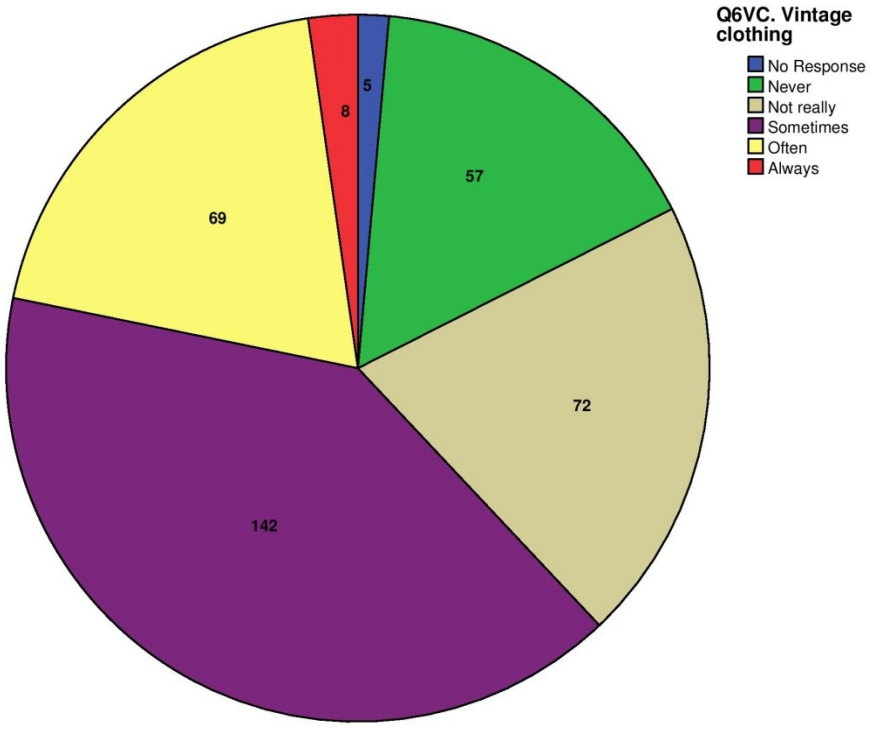


Figure 143. Q6VC. Vintage clothing

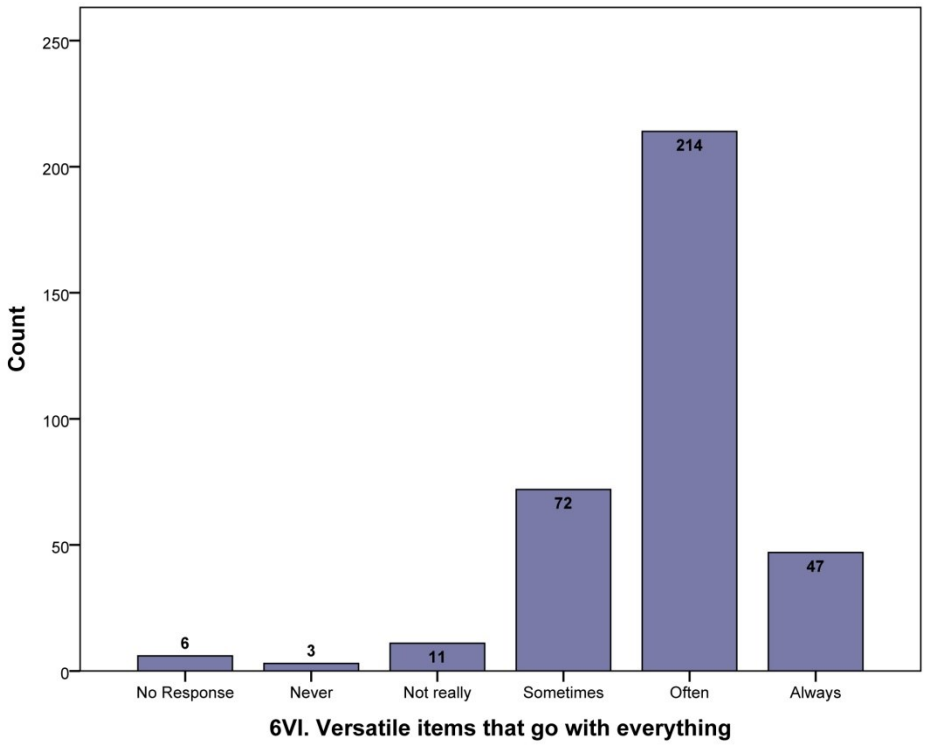


Figure 144.Q6VL. Versatile items that go with everything

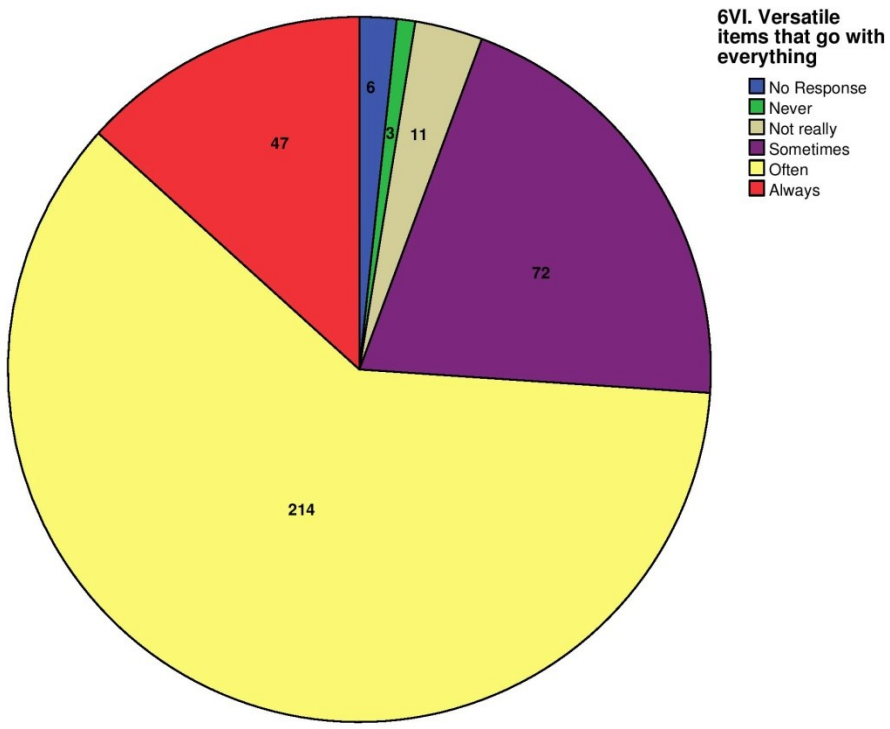


Figure 145. Q6VL. Versatile items that go with everything

Q7. How does buying clothes make you feel?

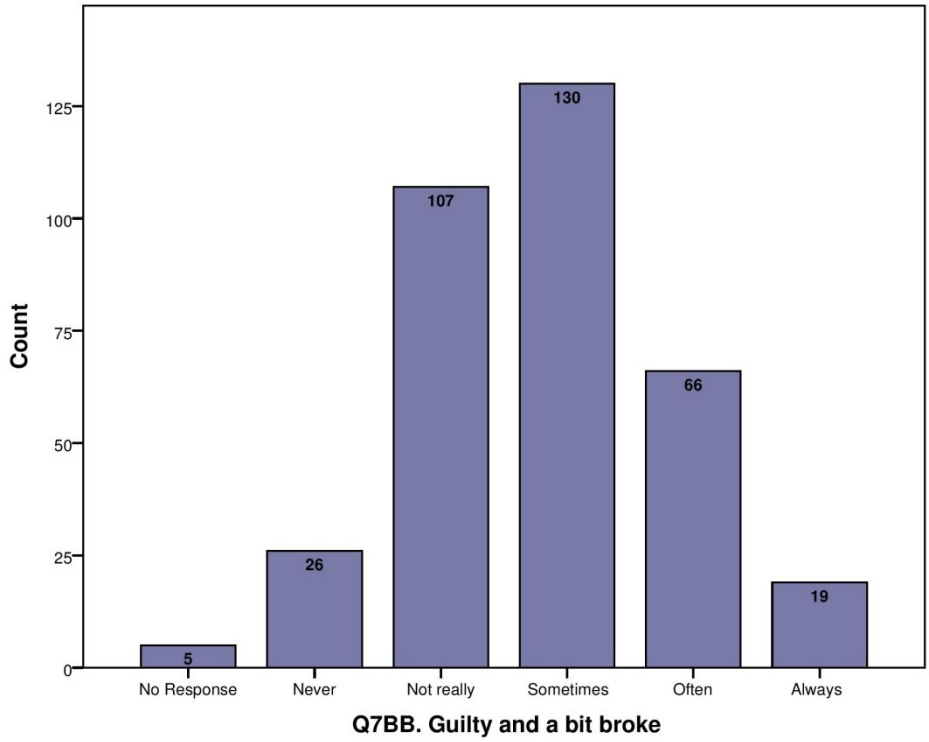


Figure 146. Q7BB. Guilty and a bit broke

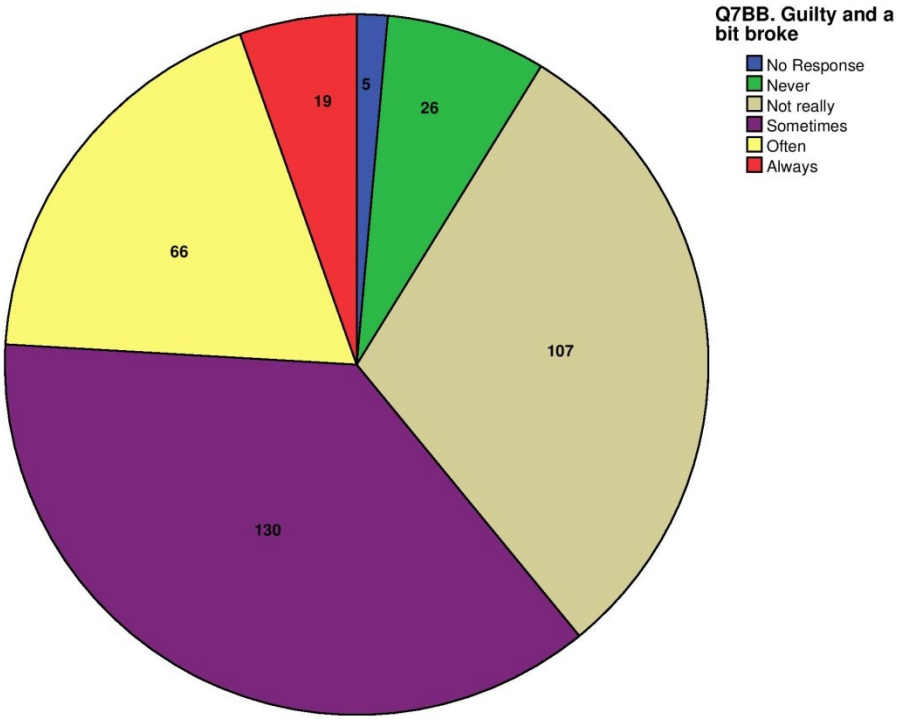


Figure 147. Q7BB. Guilty and a bit broke

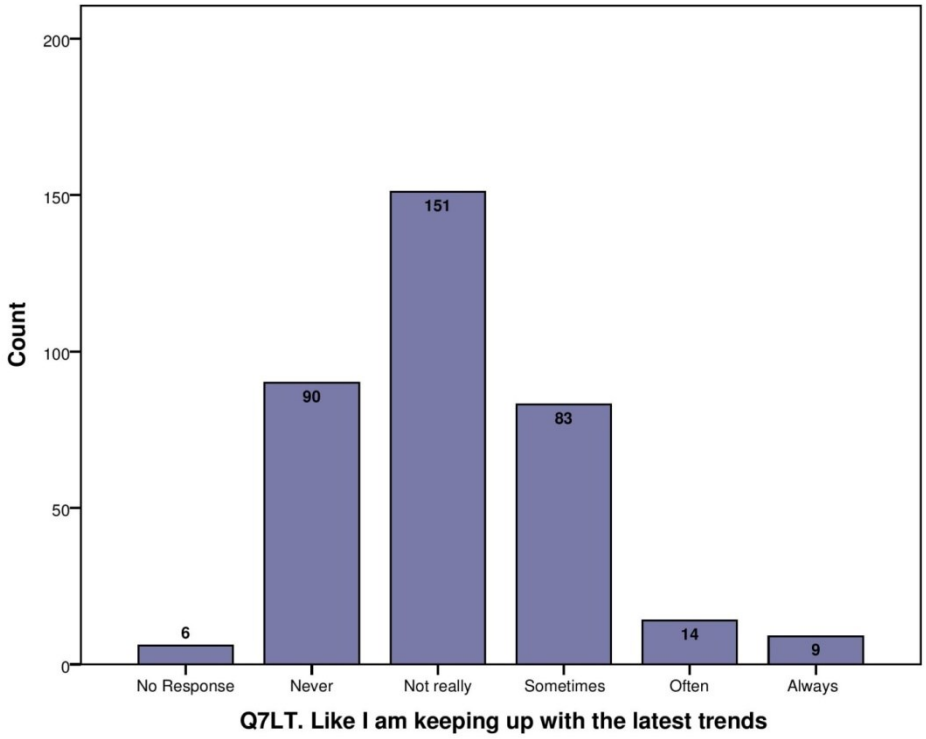


Figure 148. Q7LT. Like I am keeping up with the latest trends

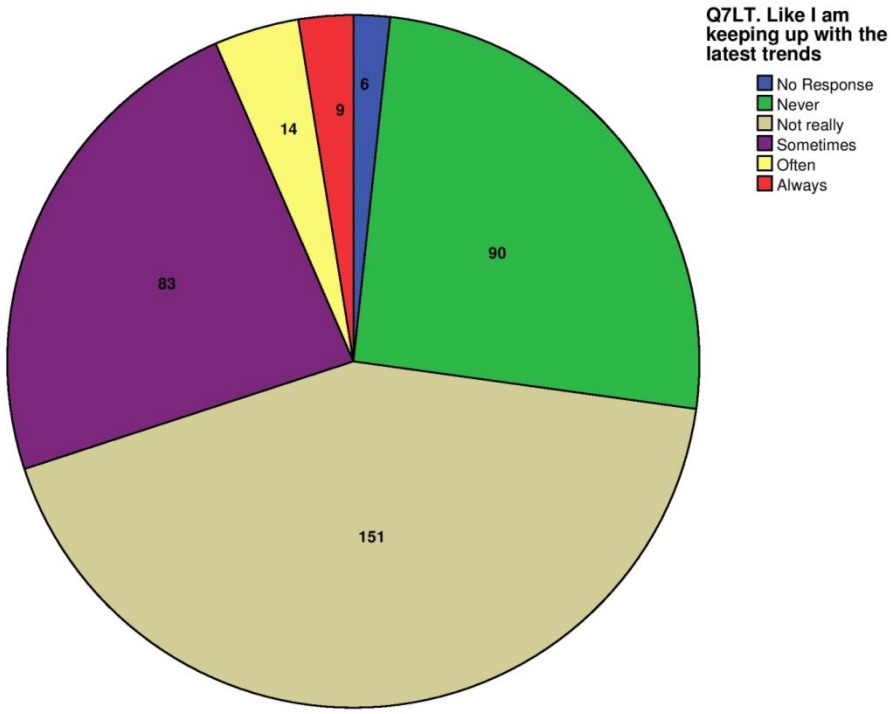


Figure 149. Q7LT. Like I am keeping up with the latest trends

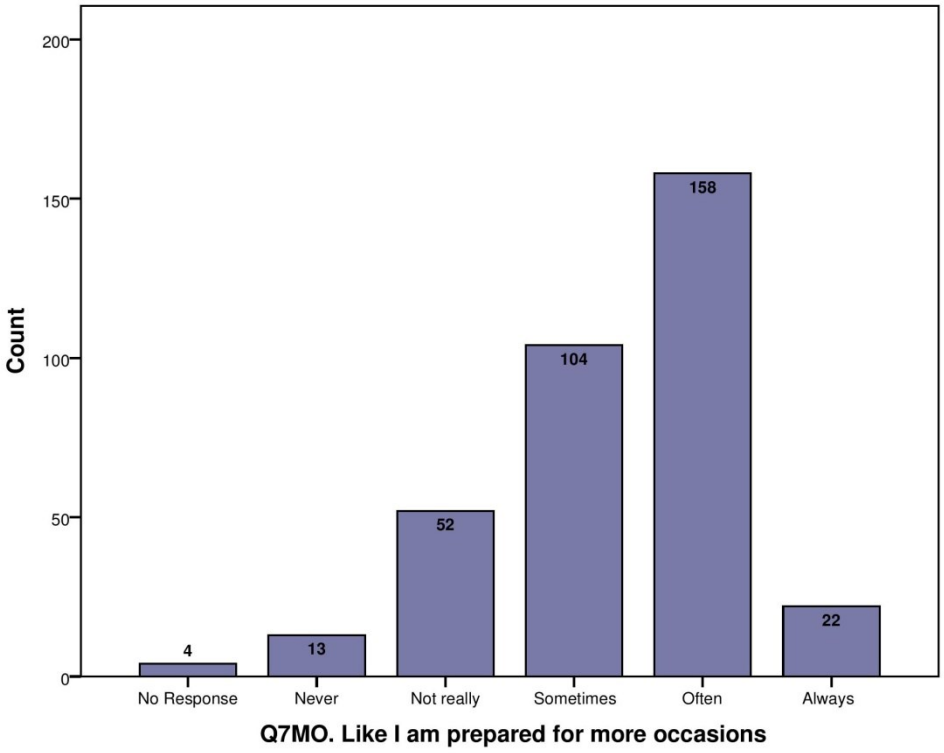


Figure 150. Q7MO. Like I am prepared for more occasions

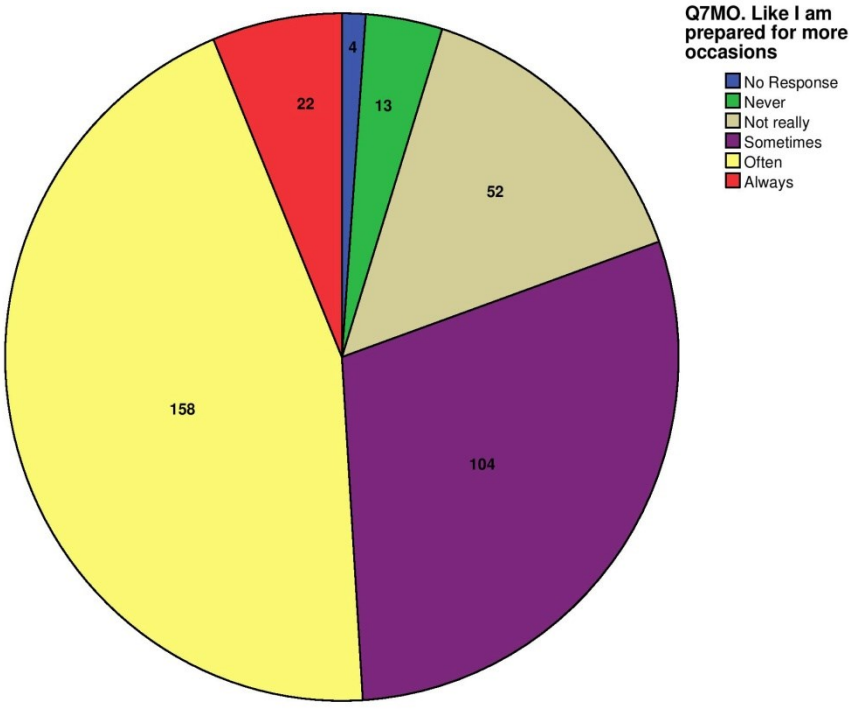


Figure 151. Q7MO. Like I am prepared for more occasions

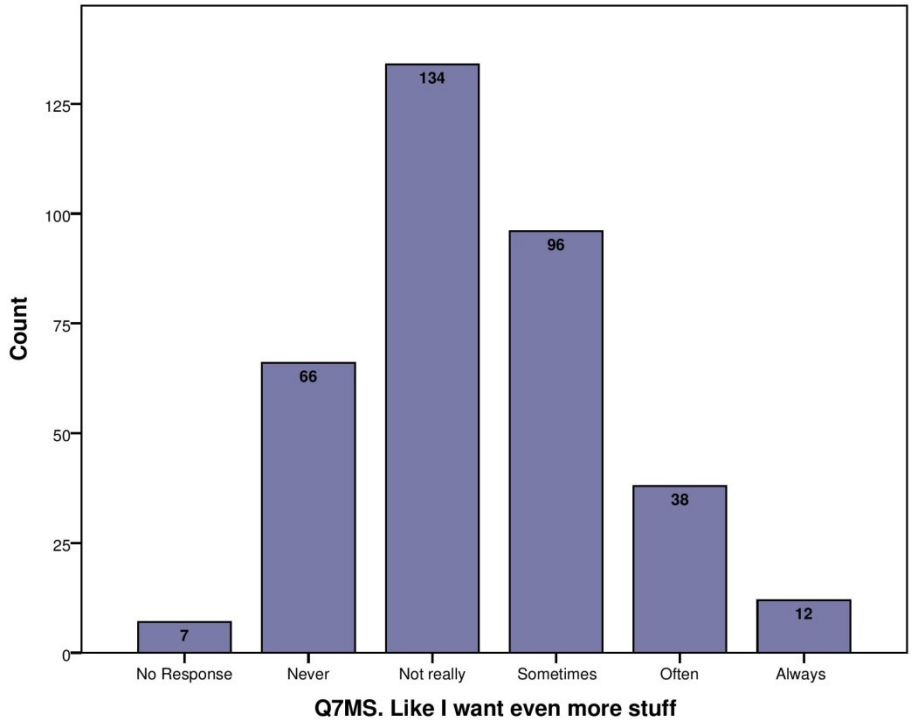


Figure 152. Q7MS. Like I want even more stuff

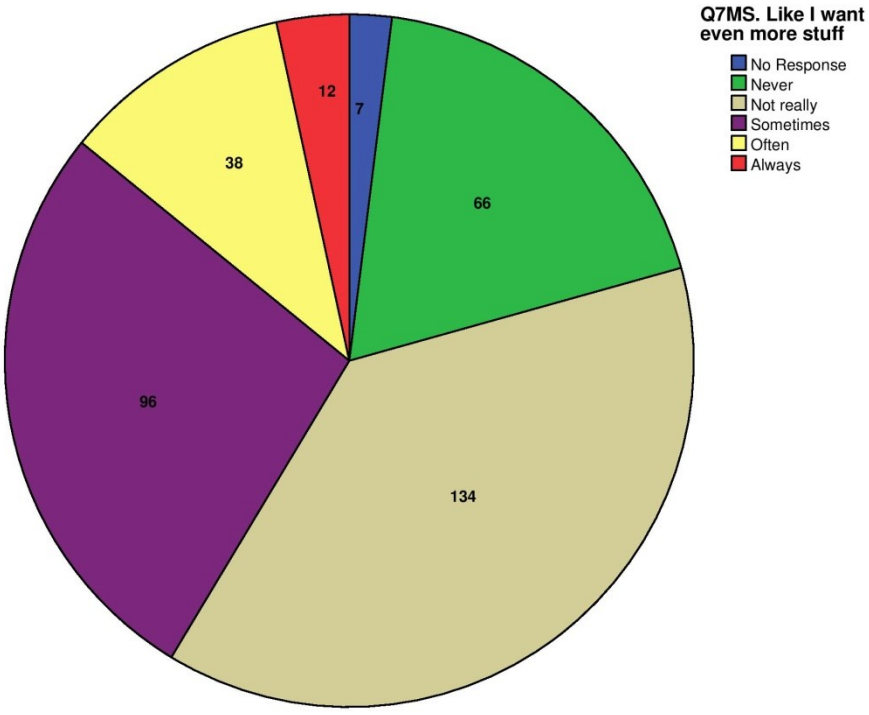


Figure 153. Q7MS. Like I want even more stuff

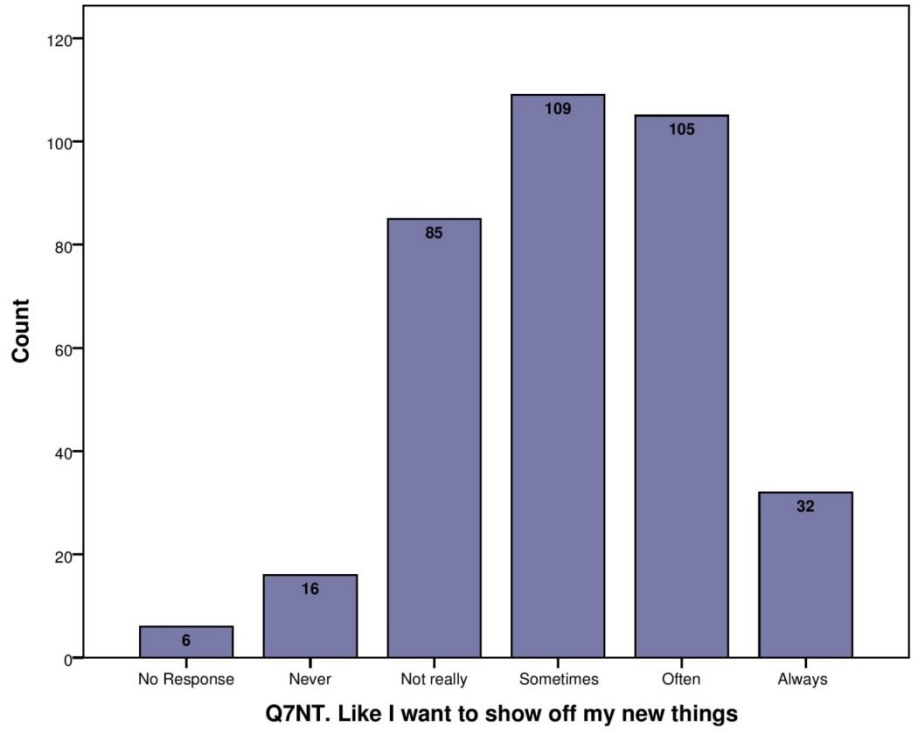


Figure 154. Q7NT. Like I want to show off my new things

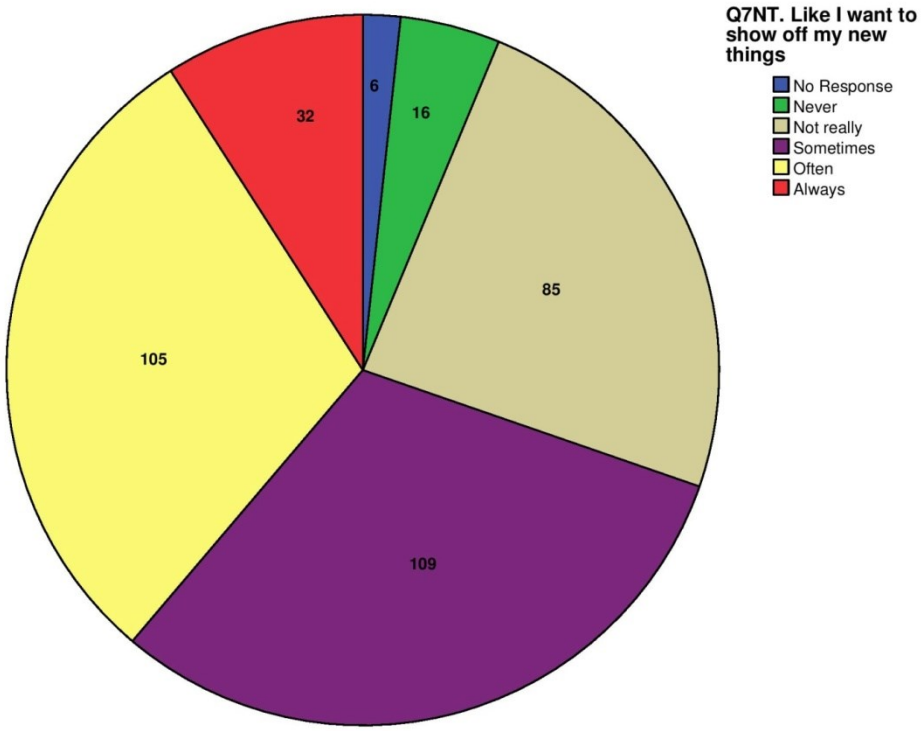


Figure 155. Q7NT. Like I want to show off my new things

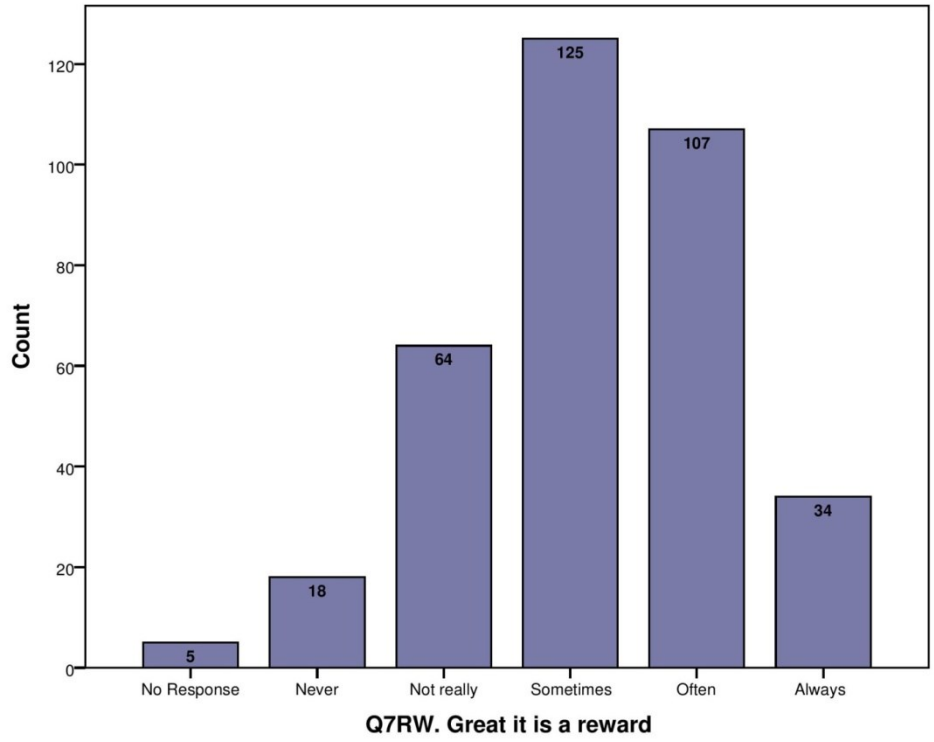


Figure 156. Q7RW. Great it is a reward

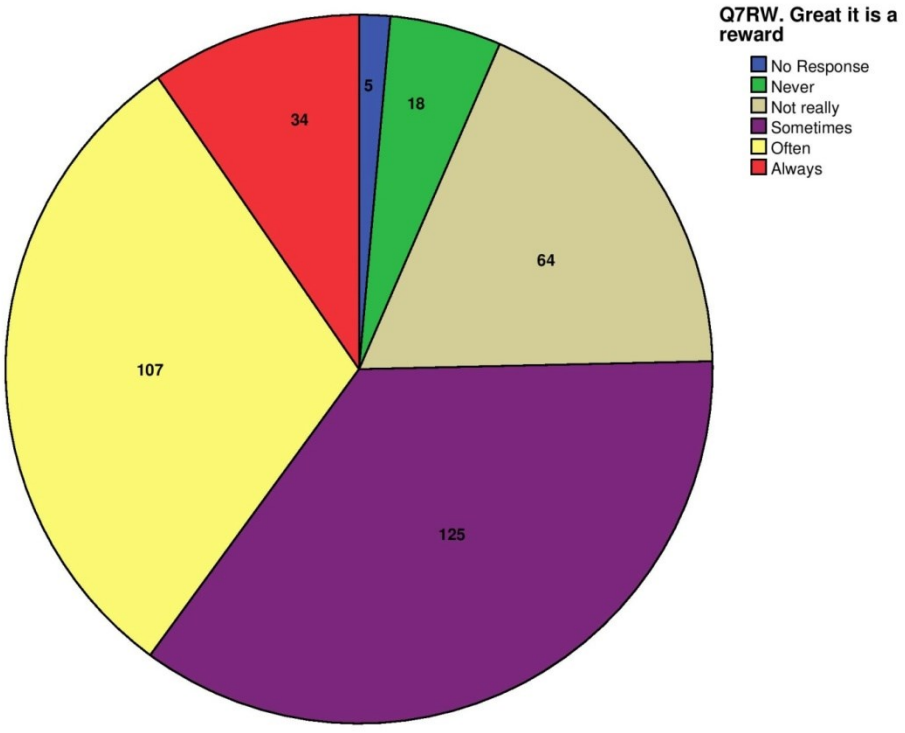


Figure 157. Q7RW. Great it is a reward

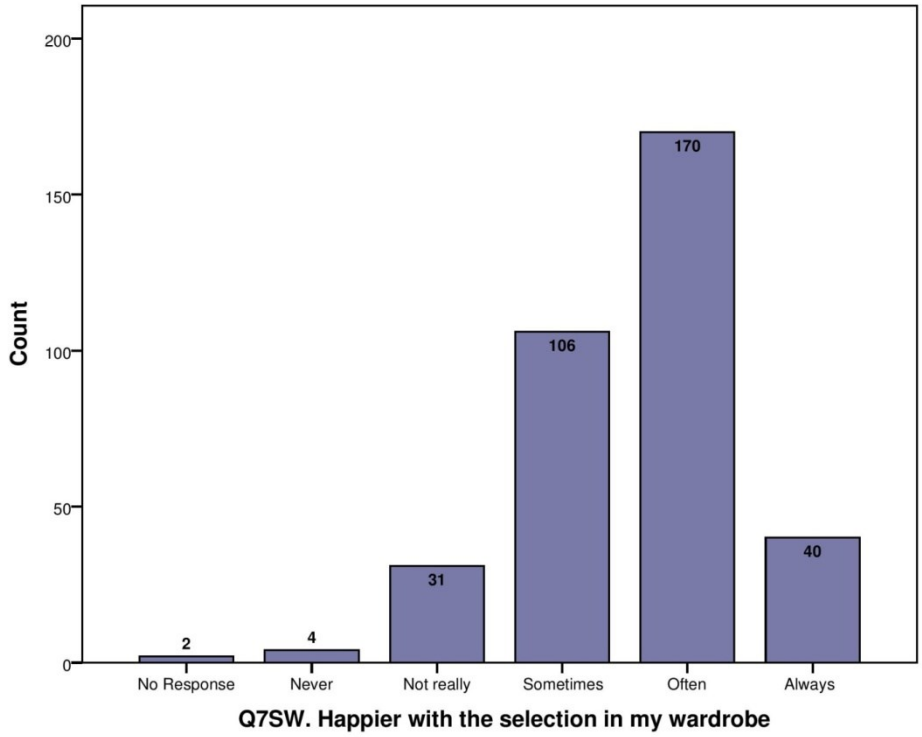


Figure 158. Q7SW. Happier with the selection in my wardrobe

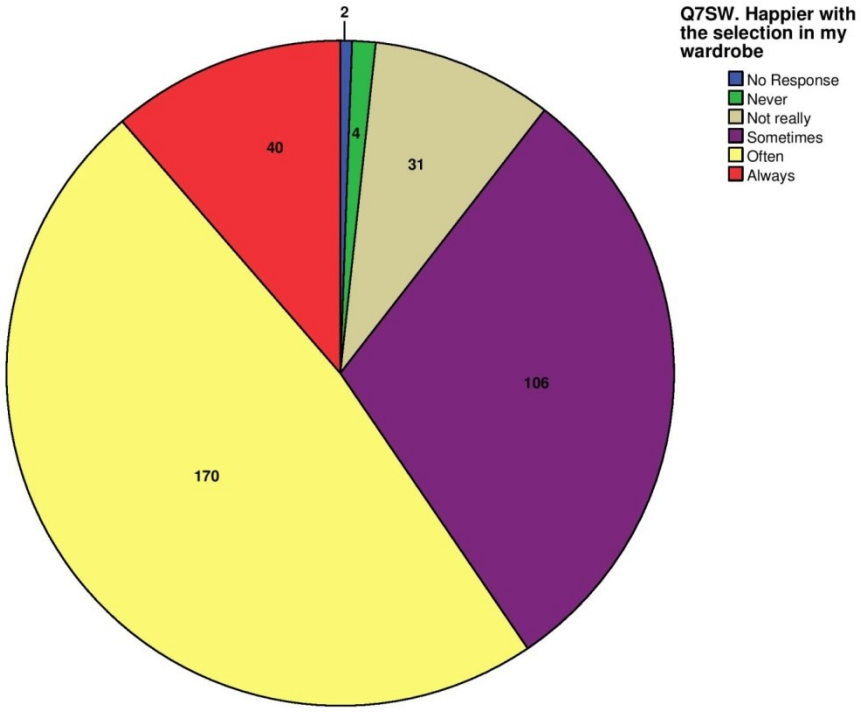


Figure 159. Q7SW. Happier with the selection in my wardrobe

10.5.5 Garment Use and Divestment Phase

Table 48. Clothes Swaps Attendance

Q9. Have you ever been to a clothes swap?	**N**	%
No but I would like to	145	41%
Yes and I would go back	72	20%
No it is not for me	66	19%
No I do not know what a clothes swap is	57	16%
Yes but I would not go again	10	3%
Other	3	1%
Total	**353**	100%

10.5.5.1 Crosstabulations for Demographic Variables and Clothes Swaps

Crosstabulations were performed for Question 9 to search for statistically significant patterns of association between demographic variables and clothes swap attendance, using the chi-square statistic and the associated significance level. Results that were not statistically significant but were indicative of areas of key importance for circular economy fashion strategies were also noted. The crosstabulations show that there is a relationship between age and clothes swaps at the $p<0.000$ significance level.

Key:	N = Number of garment user types within demographic category G = % of garment user types out of all garment user types (row variable) D = % of garment user types within demographic category (column variable) X^2 = chi-square statistic df = degrees of freedom Sig. = Significance level * p<0.05, **p<0.01, ***p<0.001

Table 49. Age and Clothes Swaps

Have you ever been to a clothes swap?		**Age**					
		18 - 24	**25 - 34**	**35 - 44**	**45 - 54**	**55 - 64**	**65 +**
Yes and I would go back.	N	10	43	10	7	1	1
	G	13.9%	59.7%	13.9%	9.7%	1.4%	1.4%
	D	**14.3%**	**30.1%**	**17.5%**	**16.7%**	**3.1%**	**11.1%**
Yes, but I would not go again.	N	1	7	1	0	1	0
	G	10.0%	70.0%	10.0%	0.0%	10.0%	0.0%
	D	**1.4%**	**4.9%**	**1.8%**	**0.0%**	**3.1%**	**0.0%**
No, but I would like to.	N	35	58	26	13	11	2
	G	24.1%	40.0%	17.9%	9.0%	7.6%	1.4%
	D	**50.0%**	**40.6%**	**45.6%**	**31.0%**	**34.4%**	**22.2%**
No, it is not for me.	N	9	13	12	13	15	4
	G	13.6%	19.7%	18.2%	19.7%	22.7%	6.1%
	D	**12.9%**	**9.1%**	**21.1%**	**31.0%**	**46.9%**	**44.4%**
No, I do not know what a clothes swap is.	N	15	22	7	7	4	2
	G	26.3%	38.6%	12.3%	12.3%	7.0%	3.5%
	D	**21.4%**	**15.4%**	**12.3%**	**16.7%**	**12.5%**	**22.2%**
Other	N	0	0	1	2	0	0
	G	0.0%	0.0%	33.3%	66.7%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**1.8%**	**4.8%**	**0.0%**	**0.0%**
χ2 62.8 **df** 25 **Sig.** 0.000***							

Table 50. Education Level and Clothes Swaps

Have you ever been to a clothes swap?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Yes and I would go back.	N	0	5	33	34
	G	0.0%	6.9%	45.8%	47.2%
	D	**0.0%**	**9.1%**	**26.2%**	**21.9%**
Yes, but I would not go again.	N	0	1	2	7
	G	0.0%	10.0%	20.0%	70.0%
	D	**0.0%**	**1.8%**	**1.6%**	**4.5%**
No, but I would like to.	N	8	26	49	62
	G	5.5%	17.9%	33.8%	42.8%
	D	**47.1%**	**47.3%**	**38.9%**	**40.0%**
No, it is not for me.	N	4	11	21	30
	G	6.1%	16.7%	31.8%	45.5%
	D	**23.5%**	**20.0%**	**16.7%**	**19.4%**
No, I do not know what a clothes swap is.	N	5	11	20	21
	G	8.8%	19.3%	35.1%	36.8%
	D	**29.4%**	**20.0%**	**15.9%**	**13.5%**
Other	N	0	1	1	1
	G	0.0%	33.3%	33.3%	33.3%
	D	**0.0%**	**1.8%**	**.8%**	**.6%**
χ2 17.4 **df** 15 **Sig.** 0.298					

Table 51. Household Income and Clothes Swaps

		Household income						
Have you ever been to a clothes swap?		**Under £10,000 p.a.**	**£10,000 to £20,000 p.a.**	**£20,000 to £30,000 p.a.**	**£30,000 to £50,000 p.a.**	**£50,000 to £70,000 p.a.**	**£70,000 to £100,000 p.a.**	**£100,000+ p.a.**
Yes and I would go back.	N	14	15	11	21	9	1	1
	G	19.4%	20.8%	15.3%	29.2%	12.5%	1.4%	1.4%
	D	**24.6%**	**21.7%**	**19.0%**	**26.9%**	**19.1%**	**3.8%**	**7.7%**
Yes, but I would not go again.	N	2	1	1	0	3	2	1
	G	20.0%	10.0%	10.0%	0.0%	30.0%	20.0%	10.0%
	D	**3.5%**	**1.4%**	**1.7%**	**0.0%**	**6.4%**	**7.7%**	**7.7%**
No, but I would like to.	N	25	34	24	33	17	7	4
	G	17.4%	23.6%	16.7%	22.9%	11.8%	4.9%	2.8%
	D	**43.9%**	**49.3%**	**41.4%**	**42.3%**	**36.2%**	**26.9%**	**30.8%**
No, it is not for me.	N	5	7	12	14	11	11	4
	G	7.8%	10.9%	18.8%	21.9%	17.2%	17.2%	6.3%
	D	**8.8%**	**10.1%**	**20.7%**	**17.9%**	**23.4%**	**42.3%**	**30.8%**
No, I do not know what a clothes swap is.	N	11	12	9	10	7	5	3
	G	19.3%	21.1%	15.8%	17.5%	12.3%	8.8%	5.3%
	D	**19.3%**	**17.4%**	**15.5%**	**12.8%**	**14.9%**	**19.2%**	**23.1%**
Other	N	0	0	1	0	0	0	0
	G	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**1.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
		χ^2	40	**df**	30	**Sig.**	0.106	

Table 52. Employment Status and Clothes Swaps

		Employment status								
Have you ever been to a clothes swap?		**Employed, working full-time**	**Employed, working part-time**	**Not employed, looking for work**	**Not employed, NOT looking for work**	**Self employed**	**Retired**	**Disabled, not able to work**	**In education or training**	**Other**
Yes and I would go back.	N	37	12	1	0	12	0	0	7	3
	G	51.4%	16.7%	1.4%	0.0%	16.7%	0.0%	0.0%	9.7%	4.2%
	D	**27.0%**	**19.7%**	**7.7%**	**0.0%**	**24.5%**	**0.0%**	**0.0%**	**10.9%**	**21.4%**
Yes, but I would not go again.	N	4	2	0	0	2	0	0	2	0
	G	40.0%	20.0%	0.0%	0.0%	20.0%	0.0%	0.0%	20.0%	0.0%
	D	**2.9%**	**3.3%**	**0.0%**	**0.0%**	**4.1%**	**0.0%**	**0.0%**	**3.1%**	**0.0%**
No, but I would like to.	N	48	22	8	4	21	3	1	31	7
	G	33.1%	15.2%	5.5%	2.8%	14.5%	2.1%	.7%	21.4%	4.8%
	D	**35.0%**	**36.1%**	**61.5%**	**66.7%**	**42.9%**	**37.5%**	**100.0%**	**48.4%**	**50.0%**
No, it is not for me.	N	26	13	0	0	9	4	0	13	1
	G	39.4%	19.7%	0.0%	0.0%	13.6%	6.1%	0.0%	19.7%	1.5%
	D	**19.0%**	**21.3%**	**0.0%**	**0.0%**	**18.4%**	**50.0%**	**0.0%**	**20.3%**	**7.1%**
No, I do not know what a clothes swap is.	N	21	10	4	2	5	1	0	11	3
	G	36.8%	17.5%	7.0%	3.5%	8.8%	1.8%	0.0%	19.3%	5.3%
	D	**15.3%**	**16.4%**	**30.8%**	**33.3%**	**10.2%**	**12.5%**	**0.0%**	**17.2%**	**21.4%**
Other	N	1	2	0	0	0	0	0	0	0
	G	33.3%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.7%**	**3.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
		χ^2	37	**df**	40	**Sig.**	0.608			

Table 53. Relationship Status and Clothes Swaps

		Relationship status							
Have you ever been to a clothes swap?		**Married**	**Widowed**	**Divorced**	**Separated**	**Civil Partnership**	**Cohabiting**	**Single**	**Other**
Yes and I would go back.	N	19	0	2	1	8	19	23	0
	G	26.4%	0.0%	2.8%	1.4%	11.1%	26.4%	31.9%	0.0%
	D	**18.8%**	**0.0%**	**14.3%**	**20.0%**	**26.7%**	**24.4%**	**20.4%**	**0.0%**
Yes, but I would not go again.	N	2	0	1	0	1	4	2	0
	G	20.0%	0.0%	10.0%	0.0%	10.0%	40.0%	20.0%	0.0%
	D	**2.0%**	**0.0%**	**7.1%**	**0.0%**	**3.3%**	**5.1%**	**1.8%**	**0.0%**
No, but I would like to.	N	33	0	7	3	7	39	48	8
	G	22.8%	0.0%	4.8%	2.1%	4.8%	26.9%	33.1%	5.5%
	D	**32.7%**	**0.0%**	**50.0%**	**60.0%**	**23.3%**	**50.0%**	**42.5%**	**72.7%**
No, it is not for me.	N	27	1	4	0	8	10	15	1
	G	40.9%	1.5%	6.1%	0.0%	12.1%	15.2%	22.7%	1.5%
	D	**26.7%**	**100.0%**	**28.6%**	**0.0%**	**26.7%**	**12.8%**	**13.3%**	**9.1%**
No, I do not know what a clothes swap is.	N	17	0	0	1	6	6	25	2
	G	29.8%	0.0%	0.0%	1.8%	10.5%	10.5%	43.9%	3.5%
	D	**16.8%**	**0.0%**	**0.0%**	**20.0%**	**20.0%**	**7.7%**	**22.1%**	**18.2%**
Other	N	3	0	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**3.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
		χ^2	46.7	**df**	35	**Sig.**	0.089		

Table 54. Children at Home under 18 and Clothes Swaps

Have you ever been to a clothes swap?		Children at Home		
		Yes	**No**	**Other**
Yes and I would go back.	N	15	57	0
	G	20.8%	79.2%	0.0%
	D	**19.0%**	**21.1%**	**0.0%**
Yes, but I would not go again.	N	3	6	0
	G	33.3%	66.7%	0.0%
	D	**3.8%**	**2.2%**	**0.0%**
No, but I would like to.	N	34	109	1
	G	23.6%	75.7%	.7%
	D	**43.0%**	**40.4%**	**100.0%**
No, it is not for me.	N	15	50	0
	G	23.1%	76.9%	0.0%
	D	**19.0%**	**18.5%**	**0.0%**
No, I do not know what a clothes swap is.	N	9	48	0
	G	15.8%	84.2%	0.0%
	D	**11.4%**	**17.8%**	**0.0%**
Other	N	3	0	0
	G	100.0%	0.0%	0.0%
	D	**3.8%**	**0.0%**	**0.0%**
χ^2 14 **df**	10	**Sig.**	0.169	

10.5.5.2 ANOVA Tests for Demographic Variables and Garment Use and Divestment Behaviours

Questions 10 and 11 gathered data on clothing divestment behaviours using a Likert scale of agreement to statements made. Data were then analysed with ANOVA tests to search for patterns of association and relationships between demographic variables and clothing divestment behaviours. Mean scores of each group within each demographic variable were compared to find significant differences.

Variables from Questions 10 and 11 with a significance level of $p<0.05$, $p<0.01$ and $p<0.001$ are presented in the following tables for each of the demographic categories. Post hoc analysis is then presented, which revealed which groups within each demographic variable showed significant mean differences at the $p<0.05$, $p<0.01$ and $p<0.001$ levels. Post hoc tests were not performed for employment status and relationship status because at least one group in each variable had fewer than two cases.

Table 55. ANOVA Test for Age and Garment Use and Divestment

Variables		**Mean Scores of Age Groups**						**F Value**	**Sig.**
		18 to 24	**25 to 34**	**35 to 44**	**45 to 54**	**55 to 64**	**65 +**		
Q10LV	When my clothes wear out or break I leave them like that.	2.48	2.64	2.50	2.34	1.97	2.00	2.9	0.014*
Q11TB	When I am bored of my clothes, they don't fit or I don't like them anymore, I put them in a textile bank.	2.49	2.70	3.13	3.07	2.90	2.63	2.5	0.029*
Q11FF	When I am bored of my clothes, they don't fit or I don't like them anymore, I give them to friends or family.	3.20	3.08	2.84	2.76	2.68	2.75	2.7	0.022*
Q11SW	When I am bored of my clothes, they don't fit or I don't like them anymore, I swap them at a clothes swap.	1.46	1.81	1.52	1.41	1.13	1.38	3.9	0.002**
Q11SO	When I am bored of my clothes, they don't fit or I don't like them anymore, I sell them online.	2.46	2.24	2.07	1.83	1.69	2.00	2.5	0.030*
*p<0.05, **p<0.01, ***p<0.001									

Table 56. ANOVA Test for Education Level and Garment Use and Divestment

Variables		Mean Scores of Education Level Groups				F Value	Sig.
		Secondary school	Sixth form college	University graduate	University post-graduate		
Q11SW	When I am bored of my clothes, they don't fit or I don't like them anymore, I swap them at a clothes swap.	1	1.42	1.64	1.64	2.7	0.045*
*p<0.05, **p<0.01, ***p<0.001							

Table 57. ANOVA Test for Household Income and Garment Use and Divestment

Variables		Mean Scores of Household Income Groups							F Value	Sig.
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.		
Q11CM	When I am bored of my clothes, they don't fit or I don't like them anymore, I customise, mend or alter them.	2.73	2.66	2.41	2.36	2.29	1.96	1.83	3.2	0.004**
*p<0.05, **p<0.01, ***p<0.001										

Table 58. ANOVA Test for Employment status and Garment Use and Divestment

Variables	Mean Scores of Employment Status Groups									F Value	Sig.
	Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other		
Q10CM	2.65	2.98	2.77	2.17	3.19	2.38	2	2.75	3.43	2.5	0.013*
When my clothes wear out or break, I customise, mend or alter them.											
Q11CM	2.25	2.54	2.42	1.83	2.94	1.86	2	2.41	2.5	2.7	0.008**
When I am bored of my clothes, they don't fit or I don't like them anymore, I customise, mend or alter them.											
*p<0.05, **p<0.01, ***p<0.001											

Table 59. ANOVA Test for Relationship status and Garment Use and Divestment

Variables	Mean Scores of Relationship Status Groups								F Value	Sig.
	Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other		
Q10LV	2.24	2	1.86	2	2.6	2.73	2.63	1.9	3.4	0.002**
When my clothes wear out or break, I leave them like that.										
Q11FF	2.77	4	2.57	3	3	2.99	3.22	2.9	2.4	0.019*
When I am bored of my clothes, they don't fit or I don't like them anymore, I give them to friends or family.										
*p<0.05, **p<0.01, ***p<0.001										

ANOVA Test for Children at home and Garment Use and Divestment

No statistically significant results.

Table 60. ANOVA Post Hoc Analysis for Demographic Variables and Garment Use and Divestment

Variables		**Age Groups**		**Mean Difference**	**Sig.**
Q10LV	When my clothes wear out or break I leave them like that.	25 to 34	55 to 64	0.675	0.010*
Q11TB	When I am bored of my clothes, they don't fit or I don't like them anymore, I put them in a textile bank.	18 to 24	35 to 44	-0.635	0.036*
Q11FF	When I am bored of my clothes, they don't fit or I don't like them anymore, I give them to friends or family.	Not statistically significant			
Q11SW	When I am bored of my clothes, they don't fit or I don't like them anymore, I swap them at a clothes swap.	25 to 34	55 to 64	0.681	0.004**
Q11SO	When I am bored of my clothes, they don't fit or I don't like them anymore, I sell them online.	Not statistically significant			
Variables		**Education Level Groups**		**Mean Difference**	**Sig.**
Q11SW	When I am bored of my clothes, they don't fit or I don't like them anymore, I swap them at a clothes swap.	Not statistically significant			
Variables		**Household Income Groups**		**Mean Difference**	**Sig.**
Q11CM	When I am bored of my clothes, they don't fit or I don't like them anymore, I customise, mend or alter them.	Under £10,000 p.a.	£70,000 to £100,000 p.a.	0.767	0.028*
Q11CM	When I am bored of my clothes, they don't fit or I don't like them anymore, I customise, mend or alter them.	£10,000 to £20,000 p.a.	£70,000 to £100,000 p.a.	0.702	0.047*

Table 61. Garment Divestment Behaviour

Q12. What do you currently do with...	Clothes that are completely worn out?	%	Clothes that you are bored of?	%	Clothes that don't fit anymore?	%	Socks and underwear that are worn out?	%
Store them in the loft / garage etc	6	1.7	50	14.2	54	15.3	1	0.3
Recycle them at home as rags / dusters etc	**101**	**28.6**	6	1.7	5	1.4	41	11.6
Bin	93	26.3	2	0.6	0	0	**248**	**70.3**
Recycling bank	97	27.5	23	6.5	26	7.4	43	12.2
Household recycling	16	4.5	4	1.1	3	0.8	13	3.7
Charity shop	27	7.6	**177**	**50.1**	**172**	**48.7**	4	1.1
Give to friends and family	2	0.6	44	12.5	50	14.2	0	0
Sell online	1	0.3	39	11.0	36	10.2	0	0
Cash for Clothes shop	7	2.0	5	1.4	4	1.1	1	0.3
High Street take back scheme	2	0.6	2	0.6	2	0.6	2	0.6
Total	**352**	**99.7**	**352**	**99.7**	**352**	**99.7**	**353**	**100.0**

10.5.5.3 Crosstabulations for Demographic Variables and Garment Divestment Behaviour

Crosstabulations were performed to search for statistically significant patterns of association between demographic variables and garment divestment behaviour, using the chi-square statistic and associated significance level. Meaningful results within each demographic variable which indicated of areas of key importance to circular economy fashion strategies were also noted. Although not statistically significant these areas highlight avenues for further investigation or consideration by business planning.

For the crosstabulations of demographic variables and garment divestment variables, age and relationship status showed a statistically significant relationship with the way worn out clothing is dealt with at the $p<0.05$ level. Education level and ways to deal with clothes that did not fit anymore also showed a statistically significant relationship at the $p<0.05$ level.

Table 62. Age and Worn Out Clothes

What do you currently do with clothes that are completely worn out?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Store them in the loft / garage etc	N	1	5	0	0	0	0
	G	16.7%	83.3%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**3.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Recycle them at home as rags / dusters etc	N	15	32	23	16	10	5
	G	14.9%	31.7%	22.8%	15.8%	9.9%	5.0%
	D	**21.7%**	**22.4%**	**40.4%**	**38.1%**	**31.3%**	**55.6%**
Bin	N	22	45	13	11	2	0
	G	23.7%	48.4%	14.0%	11.8%	2.2%	0.0%
	D	**31.9%**	**31.5%**	**22.8%**	**26.2%**	**6.3%**	**0.0%**
Recycling bank	N	18	39	18	10	9	3
	G	18.6%	40.2%	18.6%	10.3%	9.3%	3.1%
	D	**26.1%**	**27.3%**	**31.6%**	**23.8%**	**28.1%**	**33.3%**
Household recycling	N	1	5	3	3	4	0
	G	6.3%	31.3%	18.8%	18.8%	25.0%	0.0%
	D	**1.4%**	**3.5%**	**5.3%**	**7.1%**	**12.5%**	**0.0%**
Charity shop	N	6	14	0	1	5	1
	G	22.2%	51.9%	0.0%	3.7%	18.5%	3.7%
	D	**8.7%**	**9.8%**	**0.0%**	**2.4%**	**15.6%**	**11.1%**
Give to friends and family	N	2	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**2.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Sell online	N	1	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Cash for Clothes shop	N	3	2	0	0	2	0
	G	42.9%	28.6%	0.0%	0.0%	28.6%	0.0%
	D	**4.3%**	**1.4%**	**0.0%**	**0.0%**	**6.3%**	**0.0%**
High Street take back scheme	N	0	1	0	1	0	0
	G	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%
	D	0.0%	0.7%	0.0%	2.4%	0.0%	0.0%
	χ^2	65	**df**	45	**Sig.**	0.027*	

Table 63. Education Level and Worn Out Clothes

What do you currently do with clothes that are completely worn out?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Store them in the loft / garage etc	N	0	0	3	3
	G	0.0%	0.0%	50.0%	50.0%
	D	**0.0%**	**0.0%**	**2.4%**	**1.9%**
Recycle them at home as rags / dusters etc	N	2	9	34	56
	G	2.0%	8.9%	33.7%	55.4%
	D	**11.8%**	**16.4%**	**27.2%**	**36.1%**
Bin	N	4	15	33	41
	G	4.3%	16.1%	35.5%	44.1%
	D	**23.5%**	**27.3%**	**26.4%**	**26.5%**
Recycling bank	N	3	19	39	36
	G	3.1%	19.6%	40.2%	37.1%
	D	**17.6%**	**34.5%**	**31.2%**	**23.2%**
Household recycling	N	2	2	4	8
	G	12.5%	12.5%	25.0%	50.0%
	D	**11.8%**	**3.6%**	**3.2%**	**5.2%**
Charity shop	N	5	7	7	8
	G	18.5%	25.9%	25.9%	29.6%
	D	**29.4%**	**12.7%**	**5.6%**	**5.2%**
Give to friends and family	N	0	1	0	1
	G	0.0%	50.0%	0.0%	50.0%
	D	**0.0%**	**1.8%**	**0.0%**	**.6%**
Sell online	N	0	0	1	0
	G	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**.8%**	**0.0%**
Cash for Clothes shop	N	1	2	3	1
	G	14.3%	28.6%	42.9%	14.3%
	D	**5.9%**	**3.6%**	**2.4%**	**.6%**
High Street take back scheme	N	0	0	1	1
	G	0.0%	0.0%	50.0%	50.0%
	D	**0.0%**	**0.0%**	**.8%**	**.6%**
χ^2 37.8 **df** 27 **Sig.** 0.08					

Table 64. Employment Status and Worn Out Clothes

What do you currently do with clothes that are completely worn out?		Employment status					
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired
Store them in the loft / garage etc	N	2	1	0	0	2	0
	G	33.3%	16.7%	0.0%	0.0%	33.3%	0.0%
	D	**1.5%**	**1.7%**	**0.0%**	**0.0%**	**4.1%**	**0.0%**
Recycle them at home as rags / dusters etc	N	31	20	4	3	22	2
	G	30.7%	19.8%	4.0%	3.0%	21.8%	2.0%
	D	**22.6%**	**33.3%**	**30.8%**	**50.0%**	**44.9%**	**25.0%**
Bin	N	39	13	5	2	10	2
	G	41.9%	14.0%	5.4%	2.2%	10.8%	2.2%
	D	**28.5%**	**21.7%**	**38.5%**	**33.3%**	**20.4%**	**25.0%**
Recycling bank	N	40	16	1	0	12	3
	G	41.2%	16.5%	1.0%	0.0%	12.4%	3.1%
	D	**29.2%**	**26.7%**	**7.7%**	**0.0%**	**24.5%**	**37.5%**
Household recycling	N	9	3	1	0	1	0
	G	56.3%	18.8%	6.3%	0.0%	6.3%	0.0%
	D	**6.6%**	**5.0%**	**7.7%**	**0.0%**	**2.0%**	**0.0%**
Charity shop	N	13	5	1	1	2	0
	G	48.1%	18.5%	3.7%	3.7%	7.4%	0.0%
	D	**9.5%**	**8.3%**	**7.7%**	**16.7%**	**4.1%**	**0.0%**
Give to friends and family	N	0	0	0	0	0	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Sell online	N	0	0	0	0	0	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Cash for Clothes shop	N	2	2	0	0	0	1
	G	28.6%	28.6%	0.0%	0.0%	0.0%	14.3%
	D	**1.5%**	**3.3%**	**0.0%**	**0.0%**	**0.0%**	**12.5%**
High Street take back scheme	N	1	0	1	0	0	0
	G	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%
	D	**.7%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.0%**
χ2 64.6 **df** 72 **Sig.** 0.719							

Table 65. Relationship Status and Worn Out Clothes

What do you currently do with clothes that are completely worn out?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
Store them in the loft / garage etc	N	0	0	0	0	0	3	3	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.9%**	**2.7%**	**0.0%**
Recycle them at home as rags / dusters etc	N	30	0	5	1	9	29	24	3
	G	29.7%	0.0%	5.0%	1.0%	8.9%	28.7%	23.8%	3.0%
	D	**29.7%**	**0.0%**	**35.7%**	**20.0%**	**30.0%**	**37.7%**	**21.2%**	**27.3%**
Bin	N	24	0	4	0	8	23	31	3
	G	25.8%	0.0%	4.3%	0.0%	8.6%	24.7%	33.3%	3.2%
	D	**23.8%**	**0.0%**	**28.6%**	**0.0%**	**26.7%**	**29.9%**	**27.4%**	**27.3%**
Recycling bank	N	32	0	3	3	6	17	34	2
	G	33.0%	0.0%	3.1%	3.1%	6.2%	17.5%	35.1%	2.1%
	D	**31.7%**	**0.0%**	**21.4%**	**60.0%**	**20.0%**	**22.1%**	**30.1%**	**18.2%**
Household recycling	N	6	1	1	0	4	1	3	0
	G	37.5%	6.3%	6.3%	0.0%	25.0%	6.3%	18.8%	0.0%
	D	**5.9%**	**100.0%**	**7.1%**	**0.0%**	**13.3%**	**1.3%**	**2.7%**	**0.0%**
Charity shop	N	8	0	1	0	2	3	11	2
	G	29.6%	0.0%	3.7%	0.0%	7.4%	11.1%	40.7%	7.4%
	D	**7.9%**	**0.0%**	**7.1%**	**0.0%**	**6.7%**	**3.9%**	**9.7%**	**18.2%**
Give to friends and family	N	0	0	0	0	0	0	1	1
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**.9%**	**9.1%**
Sell online	N	0	0	0	0	0	0	1	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**.9%**	**0.0%**
Cash for Clothes shop	N	1	0	0	1	1	0	4	0
	G	14.3%	0.0%	0.0%	14.3%	14.3%	0.0%	57.1%	0.0%
	D	**1.0%**	**0.0%**	**0.0%**	**20.0%**	**3.3%**	**0.0%**	**3.5%**	**0.0%**
High Street take back scheme	N	0	0	0	0	0	1	1	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.3%**	**.9%**	**0.0%**
χ^2 83.2	**df**	63	**Sig.**	0.045*					

Table 66. Children at Home and Worn Out Clothes

What do you currently do with clothes that are completely worn out?		Children at Home		
		Yes	**No**	**Other**
Store them in the loft / garage etc	N	0	6	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**2.2%**	**0.0%**
Recycle them at home as rags / dusters etc	N	25	75	0
	G	25.0%	75.0%	0.0%
	D	**31.6%**	**27.9%**	**0.0%**
Bin	N	18	74	0
	G	19.6%	80.4%	0.0%
	D	**22.8%**	**27.5%**	**0.0%**
Recycling bank	N	26	70	1
	G	26.8%	72.2%	1.0%
	D	**32.9%**	**26.0%**	**100.0%**
Household recycling	N	3	13	0
	G	18.8%	81.3%	0.0%
	D	**3.8%**	**4.8%**	**0.0%**
Charity shop	N	4	22	0
	G	15.4%	84.6%	0.0%
	D	**5.1%**	**8.2%**	**0.0%**
Give to friends and family	N	0	2	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**.7%**	**0.0%**
Sell online	N	0	1	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**.4%**	**0.0%**
Cash for Clothes shop	N	2	5	0
	G	28.6%	71.4%	0.0%
	D	**2.5%**	**1.9%**	**0.0%**
High Street take back scheme	N	1	1	0
	G	50.0%	50.0%	0.0%
	D	**1.3%**	**.4%**	**0.0%**
χ^2 9 **df** 18 **Sig.**		0.959		

Table 67. Age and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Store them in the loft / garage etc	N	15	18	10	4	2	1
	G	30.0%	36.0%	20.0%	8.0%	4.0%	2.0%
	D	**21.7%**	**12.6%**	**17.5%**	**9.5%**	**6.3%**	**11.1%**
Recycle them at home as rags / dusters etc	N	0	4	1	0	1	0
	G	0.0%	66.7%	16.7%	0.0%	16.7%	0.0%
	D	**0.0%**	**2.8%**	**1.8%**	**0.0%**	**3.1%**	**0.0%**
Bin	N	0	2	0	0	0	0
	G	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Recycling bank	N	3	8	7	5	0	0
	G	13.0%	34.8%	30.4%	21.7%	0.0%	0.0%
	D	**4.3%**	**5.6%**	**12.3%**	**11.9%**	**0.0%**	**0.0%**
Household recycling	N	1	1	1	0	1	0
	G	25.0%	25.0%	25.0%	0.0%	25.0%	0.0%
	D	**1.4%**	**.7%**	**1.8%**	**0.0%**	**3.1%**	**0.0%**
Charity shop	N	27	71	32	21	19	7
	G	15.3%	40.1%	18.1%	11.9%	10.7%	4.0%
	D	**39.1%**	**49.7%**	**56.1%**	**50.0%**	**59.4%**	**77.8%**
Give to friends and family	N	11	19	5	6	2	1
	G	25.0%	43.2%	11.4%	13.6%	4.5%	2.3%
	D	**15.9%**	**13.3%**	**8.8%**	**14.3%**	**6.3%**	**11.1%**
Sell online	N	10	18	1	5	5	0
	G	25.6%	46.2%	2.6%	12.8%	12.8%	0.0%
	D	**14.5%**	**12.6%**	**1.8%**	**11.9%**	**15.6%**	**0.0%**
Cash for Clothes shop	N	1	1	0	1	2	0
	G	20.0%	20.0%	0.0%	20.0%	40.0%	0.0%
	D	**1.4%**	**.7%**	**0.0%**	**2.4%**	**6.3%**	**0.0%**
High Street take back scheme	N	1	1	0	0	0	0
	G	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
χ^2 44.6	**df**	45	**Sig.**	0.489			

Table 68. Education Level and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Store them in the loft / garage etc	N	2	9	13	26
	G	4.0%	18.0%	26.0%	52.0%
	D	**11.8%**	**16.4%**	**10.4%**	**16.8%**
Recycle them at home as rags / dusters etc	N	1	1	1	3
	G	16.7%	16.7%	16.7%	50.0%
	D	**5.9%**	**1.8%**	**.8%**	**1.9%**
Bin	N	0	1	0	1
	G	0.0%	50.0%	0.0%	50.0%
	D	**0.0%**	**1.8%**	**0.0%**	**.6%**
Recycling bank	N	1	5	4	13
	G	4.3%	21.7%	17.4%	56.5%
	D	**5.9%**	**9.1%**	**3.2%**	**8.4%**
Household recycling	N	0	0	3	1
	G	0.0%	0.0%	75.0%	25.0%
	D	**0.0%**	**0.0%**	**2.4%**	**.6%**
Charity shop	N	6	29	64	78
	G	3.4%	16.4%	36.2%	44.1%
	D	**35.3%**	**52.7%**	**51.2%**	**50.3%**
Give to friends and family	N	3	5	16	20
	G	6.8%	11.4%	36.4%	45.5%
	D	**17.6%**	**9.1%**	**12.8%**	**12.9%**
Sell online	N	2	3	21	13
	G	5.1%	7.7%	53.8%	33.3%
	D	**11.8%**	**5.5%**	**16.8%**	**8.4%**
Cash for Clothes shop	N	2	1	2	0
	G	40.0%	20.0%	40.0%	0.0%
	D	**11.8%**	**1.8%**	**1.6%**	**0.0%**
High Street take back scheme	N	0	1	1	0
	G	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**1.8%**	**.8%**	**0.0%**
χ^2 39.1 **df** 27 **Sig.** 0.062					

Table 69. Household Income and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Household income						
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
Store them in the loft / garage etc	N	9	10	9	9	3	7	2
	G	18.4%	20.4%	18.4%	18.4%	6.1%	14.3%	4.1%
	D	**15.8%**	**14.5%**	**15.8%**	**11.5%**	**6.4%**	**26.9%**	**15.4%**
Recycle them at home as rags / dusters etc	N	2	1	2	1	0	0	0
	G	33.3%	16.7%	33.3%	16.7%	0.0%	0.0%	0.0%
	D	**3.5%**	**1.4%**	**3.5%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**
Bin	N	0	1	0	1	0	0	0
	G	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**
Recycling bank	N	5	4	3	5	6	0	0
	G	21.7%	17.4%	13.0%	21.7%	26.1%	0.0%	0.0%
	D	**8.8%**	**5.8%**	**5.3%**	**6.4%**	**12.8%**	**0.0%**	**0.0%**
Household recycling	N	0	0	1	1	1	1	0
	G	0.0%	0.0%	25.0%	25.0%	25.0%	25.0%	0.0%
	D	**0.0%**	**0.0%**	**1.8%**	**1.3%**	**2.1%**	**3.8%**	**0.0%**
Charity shop	N	21	36	27	42	25	13	10
	G	12.1%	20.7%	15.5%	24.1%	14.4%	7.5%	5.7%
	D	**36.8%**	**52.2%**	**47.4%**	**53.8%**	**53.2%**	**50.0%**	**76.9%**
Give to friends and family	N	11	9	4	12	5	1	1
	G	25.6%	20.9%	9.3%	27.9%	11.6%	2.3%	2.3%
	D	**19.3%**	**13.0%**	**7.0%**	**15.4%**	**10.6%**	**3.8%**	**7.7%**
Sell online	N	5	7	10	7	6	4	0
	G	12.8%	17.9%	25.6%	17.9%	15.4%	10.3%	0.0%
	D	**8.8%**	**10.1%**	**17.5%**	**9.0%**	**12.8%**	**15.4%**	**0.0%**
Cash for Clothes shop	N	2	1	1	0	1	0	0
	G	40.0%	20.0%	20.0%	0.0%	20.0%	0.0%	0.0%
	D	**3.5%**	**1.4%**	**1.8%**	**0.0%**	**2.1%**	**0.0%**	**0.0%**
High Street take back scheme	N	2	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**3.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
χ^2 50.5	**df**	54	**Sig.**	0.609				

Table 70. Employment Status and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Employment status								
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other
Store them in the loft / garage etc	N	21	12	0	2	1	1	0	13	0
	G	42.0%	24.0%	0.0%	4.0%	2.0%	2.0%	0.0%	26.0%	0.0%
	D	**15.3%**	**20.0%**	**0.0%**	**33.3%**	**2.0%**	**12.5%**	**0.0%**	**20.3%**	**0.0%**
Recycle them at home as rags / dusters etc	N	4	0	0	0	2	0	0	0	0
	G	66.7%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%
	D	**2.9%**	**0.0%**	**0.0%**	**0.0%**	**4.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Bin	N	0	1	0	0	0	0	0	1	0
	G	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**1.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
Recycling bank	N	13	2	1	0	3	0	0	4	0
	G	56.5%	8.7%	4.3%	0.0%	13.0%	0.0%	0.0%	17.4%	0.0%
	D	**9.5%**	**3.3%**	**7.7%**	**0.0%**	**6.1%**	**0.0%**	**0.0%**	**6.3%**	**0.0%**
Household recycling	N	3	0	0	0	0	0	0	1	0
	G	75.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%
	D	**2.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
Charity shop	N	68	29	7	4	30	5	1	25	8
	G	38.4%	16.4%	4.0%	2.3%	16.9%	2.8%	.6%	14.1%	4.5%
	D	**49.6%**	**48.3%**	**53.8%**	**66.7%**	**61.2%**	**62.5%**	**100.0%**	**39.1%**	**57.1%**
Give to friends and family	N	13	7	3	0	8	1	0	9	3
	G	29.5%	15.9%	6.8%	0.0%	18.2%	2.3%	0.0%	20.5%	6.8%
	D	**9.5%**	**11.7%**	**23.1%**	**0.0%**	**16.3%**	**12.5%**	**0.0%**	**14.1%**	**21.4%**
Sell online	N	13	8	1	0	5	0	0	9	3
	G	33.3%	20.5%	2.6%	0.0%	12.8%	0.0%	0.0%	23.1%	7.7%
	D	**9.5%**	**13.3%**	**7.7%**	**0.0%**	**10.2%**	**0.0%**	**0.0%**	**14.1%**	**21.4%**
Cash for Clothes shop	N	2	1	0	0	0	1	0	1	0
	G	40.0%	20.0%	0.0%	0.0%	0.0%	20.0%	0.0%	20.0%	0.0%
	D	**1.5%**	**1.7%**	**0.0%**	**0.0%**	**0.0%**	**12.5%**	**0.0%**	**1.6%**	**0.0%**
High Street take back scheme	N	0	0	1	0	0	0	0	1	0
	G	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
χ^2 66.5		**df** 72		**Sig.** 0.662						

Table 71. Relationship Status and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
Store them in the loft / garage etc	N	14	0	1	1	2	11	20	1
	G	28.0%	0.0%	2.0%	2.0%	4.0%	22.0%	40.0%	2.0%
	D	**13.9%**	**0.0%**	**7.1%**	**20.0%**	**6.7%**	**14.3%**	**17.7%**	**9.1%**
Recycle them at home as rags / dusters etc	N	2	0	0	0	0	1	3	0
	G	33.3%	0.0%	0.0%	0.0%	0.0%	16.7%	50.0%	0.0%
	D	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.3%**	**2.7%**	**0.0%**
Bin	N	1	0	0	0	0	0	1	0
	G	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
	D	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**.9%**	**0.0%**
Recycling bank	N	8	0	0	0	3	6	6	0
	G	34.8%	0.0%	0.0%	0.0%	13.0%	26.1%	26.1%	0.0%
	D	**7.9%**	**0.0%**	**0.0%**	**0.0%**	**10.0%**	**7.8%**	**5.3%**	**0.0%**
Household recycling	N	1	0	0	0	1	0	2	0
	G	25.0%	0.0%	0.0%	0.0%	25.0%	0.0%	50.0%	0.0%
	D	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**3.3%**	**0.0%**	**1.8%**	**0.0%**
Charity shop	N	53	1	9	3	18	39	49	5
	G	29.9%	.6%	5.1%	1.7%	10.2%	22.0%	27.7%	2.8%
	D	**52.5%**	**100.0%**	**64.3%**	**60.0%**	**60.0%**	**50.6%**	**43.4%**	**45.5%**
Give to friends and family	N	13	0	1	0	2	9	17	2
	G	29.5%	0.0%	2.3%	0.0%	4.5%	20.5%	38.6%	4.5%
	D	**12.9%**	**0.0%**	**7.1%**	**0.0%**	**6.7%**	**11.7%**	**15.0%**	**18.2%**
Sell online	N	8	0	3	0	3	11	12	2
	G	20.5%	0.0%	7.7%	0.0%	7.7%	28.2%	30.8%	5.1%
	D	**7.9%**	**0.0%**	**21.4%**	**0.0%**	**10.0%**	**14.3%**	**10.6%**	**18.2%**
Cash for Clothes shop	N	1	0	0	1	1	0	1	1
	G	20.0%	0.0%	0.0%	20.0%	20.0%	0.0%	20.0%	20.0%
	D	**1.0%**	**0.0%**	**0.0%**	**20.0%**	**3.3%**	**0.0%**	**.9%**	**9.1%**
High Street take back scheme	N	0	0	0	0	0	0	2	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.8%**	**0.0%**
χ^2 45.7	**df** 63	**Sig.** 0.950							

Table 72. Children at Home and Lost Appeal Wardrobe Items

What do you currently do with clothes that you are bored of?		Children at Home		
		Yes	No	Other
Store them in the loft / garage etc	N	13	37	0
	G	26.0%	74.0%	0.0%
	D	**16.5%**	**13.8%**	**0.0%**
Recycle them at home as rags / dusters etc	N	0	5	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**1.9%**	**0.0%**
Bin	N	1	1	0
	G	50.0%	50.0%	0.0%
	D	**1.3%**	**.4%**	**0.0%**
Recycling bank	N	4	18	0
	G	18.2%	81.8%	0.0%
	D	**5.1%**	**6.7%**	**0.0%**
Household recycling	N	1	3	0
	G	25.0%	75.0%	0.0%
	D	**1.3%**	**1.1%**	**0.0%**
Charity shop	N	41	134	1
	G	23.3%	76.1%	.6%
	D	**51.9%**	**49.8%**	**100.0%**
Give to friends and family	N	8	36	0
	G	18.2%	81.8%	0.0%
	D	**10.1%**	**13.4%**	**0.0%**
Sell online	N	10	29	0
	G	25.6%	74.4%	0.0%
	D	**12.7%**	**10.8%**	**0.0%**
Cash for Clothes shop	N	1	4	0
	G	20.0%	80.0%	0.0%
	D	**1.3%**	**1.5%**	**0.0%**
High Street take back scheme	N	0	2	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**.7%**	**0.0%**
χ^2 5.3 **df** 18 **Sig.**		0.998		

Table 73. Age and Garments with Unsuitable Fit

What do you currently do with clothes that don't fit anymore?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Store them in the loft / garage etc	N	10	17	10	8	7	2
	G	18.5%	31.5%	18.5%	14.8%	13.0%	3.7%
	D	**14.5%**	**11.9%**	**17.5%**	**19.0%**	**21.9%**	**22.2%**
Recycle them at home as rags / dusters etc	N	0	5	0	0	0	0
	G	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**3.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Bin	N						
	G						
	D						
Recycling bank	N	4	12	7	3	0	0
	G	15.4%	46.2%	26.9%	11.5%	0.0%	0.0%
	D	**5.8%**	**8.4%**	**12.3%**	**7.1%**	**0.0%**	**0.0%**
Household recycling	N	1	2	0	0	0	0
	G	33.3%	66.7%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Charity shop	N	32	66	28	23	18	5
	G	18.6%	38.4%	16.3%	13.4%	10.5%	2.9%
	D	**46.4%**	**46.2%**	**49.1%**	**54.8%**	**56.3%**	**55.6%**
Give to friends and family	N	12	23	6	4	3	2
	G	24.0%	46.0%	12.0%	8.0%	6.0%	4.0%
	D	**17.4%**	**16.1%**	**10.5%**	**9.5%**	**9.4%**	**22.2%**
Sell online	N	8	16	6	3	3	0
	G	22.2%	44.4%	16.7%	8.3%	8.3%	0.0%
	D	**11.6%**	**11.2%**	**10.5%**	**7.1%**	**9.4%**	**0.0%**
Cash for Clothes shop	N	1	1	0	1	1	0
	G	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%
	D	**1.4%**	**.7%**	**0.0%**	**2.4%**	**3.1%**	**0.0%**
High Street take back scheme	N	1	1	0	0	0	0
	G	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
χ^2 27.6	**df**	40	**Sig.**	0.931			

Table 74. Education Level and Unsuitable Fit Garments

What do you currently do with clothes that don't fit anymore?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Store them in the loft / garage etc	N	3	7	16	28
	G	5.6%	13.0%	29.6%	51.9%
	D	**17.6%**	**12.7%**	**12.8%**	**18.1%**
Recycle them at home as rags / dusters etc	N	0	1	3	1
	G	0.0%	20.0%	60.0%	20.0%
	D	**0.0%**	**1.8%**	**2.4%**	**.6%**
Bin	N				
	G				
	D				
Recycling bank	N	1	4	6	15
	G	3.8%	15.4%	23.1%	57.7%
	D	**5.9%**	**7.3%**	**4.8%**	**9.7%**
Household recycling	N	0	0	1	2
	G	0.0%	0.0%	33.3%	66.7%
	D	**0.0%**	**0.0%**	**.8%**	**1.3%**
Charity shop	N	6	33	62	71
	G	3.5%	19.2%	36.0%	41.3%
	D	**35.3%**	**60.0%**	**49.6%**	**45.8%**
Give to friends and family	N	3	5	15	27
	G	6.0%	10.0%	30.0%	54.0%
	D	**17.6%**	**9.1%**	**12.0%**	**17.4%**
Sell online	N	2	4	19	11
	G	5.6%	11.1%	52.8%	30.6%
	D	**11.8%**	**7.3%**	**15.2%**	**7.1%**
Cash for Clothes shop	N	2	0	2	0
	G	50.0%	0.0%	50.0%	0.0%
	D	**11.8%**	**0.0%**	**1.6%**	**0.0%**
High Street take back scheme	N	0	1	1	0
	G	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**1.8%**	**.8%**	**0.0%**
χ^2 38.8	**df**	24	**Sig.**	0.028*	

Table 75. Household Income and Unsuitable Fit Garments

What do you currently do with clothes that don't fit anymore?		Household income						
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
Store them in the loft / garage etc	N	7	12	8	13	8	4	1
	G	13.2%	22.6%	15.1%	24.5%	15.1%	7.5%	1.9%
	D	**12.3%**	**17.4%**	**14.0%**	**16.7%**	**17.0%**	**15.4%**	**7.7%**
Recycle them at home as rags / dusters etc	N	1	2	2	0	0	0	0
	G	20.0%	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.8%**	**2.9%**	**3.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Bin	N							
	G							
	D							
Recycling bank	N	4	6	5	6	5	0	0
	G	15.4%	23.1%	19.2%	23.1%	19.2%	0.0%	0.0%
	D	**7.0%**	**8.7%**	**8.8%**	**7.7%**	**10.6%**	**0.0%**	**0.0%**
Household recycling	N	1	0	1	1	0	0	0
	G	33.3%	0.0%	33.3%	33.3%	0.0%	0.0%	0.0%
	D	**1.8%**	**0.0%**	**1.8%**	**1.3%**	**0.0%**	**0.0%**	**0.0%**
Charity shop	N	23	31	25	39	26	15	10
	G	13.6%	18.3%	14.8%	23.1%	15.4%	8.9%	5.9%
	D	**40.4%**	**44.9%**	**43.9%**	**50.0%**	**55.3%**	**57.7%**	**76.9%**
Give to friends and family	N	12	9	8	11	4	3	2
	G	24.5%	18.4%	16.3%	22.4%	8.2%	6.1%	4.1%
	D	**21.1%**	**13.0%**	**14.0%**	**14.1%**	**8.5%**	**11.5%**	**15.4%**
Sell online	N	5	8	7	8	4	4	0
	G	13.9%	22.2%	19.4%	22.2%	11.1%	11.1%	0.0%
	D	**8.8%**	**11.6%**	**12.3%**	**10.3%**	**8.5%**	**15.4%**	**0.0%**
Cash for Clothes shop	N	2	1	1	0	0	0	0
	G	50.0%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%
	D	**3.5%**	**1.4%**	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
High Street take back scheme	N	2	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**3.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
χ^2 37.9	**df**	48	**Sig.**	0.853				

Table 76. Employment Status and Unsuitable Fit Garments

What do you currently do with clothes that don't fit anymore?		Employment status								
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other
Store them in the loft / garage etc	N	25	7	0	2	8	0	0	11	1
	G	46.3%	13.0%	0.0%	3.7%	14.8%	0.0%	0.0%	20.4%	1.9%
	D	**18.2%**	**11.7%**	**0.0%**	**33.3%**	**16.3%**	**0.0%**	**0.0%**	**17.2%**	**7.1%**
Recycle them at home as rags / dusters etc	N	2	1	0	0	2	0	0	0	0
	G	40.0%	20.0%	0.0%	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.5%**	**1.7%**	**0.0%**	**0.0%**	**4.1%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Bin										
Recycling bank	N	14	4	1	0	2	0	1	4	0
	G	53.8%	15.4%	3.8%	0.0%	7.7%	0.0%	3.8%	15.4%	0.0%
	D	**10.2%**	**6.7%**	**7.7%**	**0.0%**	**4.1%**	**0.0%**	**100.0%**	**6.3%**	**0.0%**
Household recycling	N	3	0	0	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**2.2%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Charity shop	N	71	29	8	4	23	5	0	25	7
	G	41.3%	16.9%	4.7%	2.3%	13.4%	2.9%	0.0%	14.5%	4.1%
	D	**51.8%**	**48.3%**	**61.5%**	**66.7%**	**46.9%**	**62.5%**	**0.0%**	**39.1%**	**50.0%**
Give to friends and family	N	14	9	2	0	9	2	0	12	2
	G	28.0%	18.0%	4.0%	0.0%	18.0%	4.0%	.0%	24.0%	4.0%
	D	**10.2%**	**15.0%**	**15.4%**	**0.0%**	**18.4%**	**25.0%**	**0.0%**	**18.8%**	**14.3%**
Sell online	N	7	9	1	0	5	0	0	10	4
	G	19.4%	25.0%	2.8%	0.0%	13.9%	0.0%	0.0%	27.8%	11.1%
	D	**5.1%**	**15.0%**	**7.7%**	**0.0%**	**10.2%**	**0.0%**	**0.0%**	**15.6%**	**28.6%**
Cash for Clothes shop	N	1	1	0	0	0	1	0	1	0
	G	25.0%	25.0%	0.0%	0.0%	0.0%	25.0%	0.0%	25.0%	0.0%
	D	**0.7%**	**1.7%**	**0.0%**	**0.0%**	**0.0%**	**12.5%**	**0.0%**	**1.6%**	**0.0%**
High Street take back scheme	N	0	0	1	0	0	0	0	1	0
	G	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
χ^2 77		**df** 64		**Sig.** 0.127						

Table 77. Relationship Status and Unsuitable Fit Garments

What do you currently do with clothes that don't fit anymore?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
Store them in the loft / garage etc	N	17	0	4	0	4	12	17	0
	G	31.5%	0.0%	7.4%	0.0%	7.4%	22.2%	31.5%	0.0%
	D	**16.8%**	**0.0%**	**28.6%**	**0.0%**	**13.3%**	**15.6%**	**15.0%**	**0.0%**
Recycle them at home as rags / dusters etc	N	0	0	0	0	0	3	2	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	60.0%	40.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.9%**	**1.8%**	**0.0%**
Bin	N								
	G								
	D								
Recycling bank	N	8	0	0	0	1	9	7	1
	G	30.8%	0.0%	0.0%	0.0%	3.8%	34.6%	26.9%	3.8%
	D	**7.9%**	**0.0%**	**0.0%**	**0.0%**	**3.3%**	**11.7%**	**6.2%**	**9.1%**
Household recycling	N	1	0	0	0	1	0	1	0
	G	33.3%	0.0%	0.0%	0.0%	33.3%	0.0%	33.3%	0.0%
	D	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**3.3%**	**0.0%**	**0.9%**	**0.0%**
Charity shop	N	53	1	7	4	16	37	52	2
	G	30.8%	0.6%	4.1%	2.3%	9.3%	21.5%	30.2%	1.2%
	D	**52.5%**	**100.0%**	**50.0%**	**80.0%**	**53.3%**	**48.1%**	**46.0%**	**18.2%**
Give to friends and family	N	13	0	1	0	4	8	20	4
	G	26.0%	.0%	2.0%	0.0%	8.0%	16.0%	40.0%	8.0%
	D	**12.9%**	**0.0%**	**7.1%**	**0.0%**	**13.3%**	**10.4%**	**17.7%**	**36.4%**
Sell online	N	8	0	2	0	4	8	11	3
	G	22.2%	0.0%	5.6%	0.0%	11.1%	22.2%	30.6%	8.3%
	D	**7.9%**	**0.0%**	**14.3%**	**0.0%**	**13.3%**	**10.4%**	**9.7%**	**27.3%**
Cash for Clothes shop	N	1	0	0	1	0	0	1	1
	G	25.0%	0.0%	0.0%	25.0%	0.0%	0.0%	25.0%	25.0%
	D	**1.0%**	**0.0%**	**0.0%**	**20.0%**	**0.0%**	**0.0%**	**0.9%**	**9.1%**
High Street take back scheme	N	0	0	0	0	0	0	2	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.8%**	**0.0%**
χ^2 61.2	**df**	56	**Sig.**	0.294					

Table 78. Children at Home and Unsuitable Fit Garments

What do you currently do with clothes that don't fit anymore?		Children at Home		
		Yes	**No**	**Other**
Store them in the loft / garage etc	N	15	39	0
	G	27.8%	72.2%	0.0%
	D	**19.0%**	**14.5%**	**0.0%**
Recycle them at home as rags / dusters etc	N	0	5	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**1.9%**	**0.0%**
Bin	N			
	G			
	D			
Recycling bank	N	6	20	0
	G	23.1%	76.9%	0.0%
	D	**7.6%**	**7.4%**	**0.0%**
Household recycling	N	0	2	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**0.7%**	**0.0%**
Charity shop	N	37	132	1
	G	21.8%	77.6%	0.6%
	D	**46.8%**	**49.1%**	**100.0%**
Give to friends and family	N	10	40	0
	G	20.0%	80.0%	.0%
	D	**12.7%**	**14.9%**	**0.0%**
Sell online	N	10	26	0
	G	27.8%	72.2%	0.0%
	D	**12.7%**	**9.7%**	**0.0%**
Cash for Clothes shop	N	1	3	0
	G	25.0%	75.0%	0.0%
	D	**1.3%**	**1.1%**	**0.0%**
High Street take back scheme	N	0	2	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**0.7%**	**0.0%**
χ^2 5.3 **df** 16 **Sig.** 0.994				

Table 79. Age and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Store them in the loft / garage etc	N	1	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Recycle them at home as rags / dusters etc	N	2	19	8	5	6	1
	G	4.9%	46.3%	19.5%	12.2%	14.6%	2.4%
	D	**2.9%**	**13.3%**	**14.0%**	**11.9%**	**18.8%**	**11.1%**
Bin	N	57	95	40	30	18	8
	G	23.0%	38.3%	16.1%	12.1%	7.3%	3.2%
	D	**81.4%**	**66.4%**	**70.2%**	**71.4%**	**56.3%**	**88.9%**
Recycling bank	N	8	22	5	4	4	0
	G	18.6%	51.2%	11.6%	9.3%	9.3%	0.0%
	D	**11.4%**	**15.4%**	**8.8%**	**9.5%**	**12.5%**	**0.0%**
Household recycling	N	0	3	4	3	3	0
	G	0.0%	23.1%	30.8%	23.1%	23.1%	0.0%
	D	**0.0%**	**2.1%**	**7.0%**	**7.1%**	**9.4%**	**0.0%**
Charity shop	N	1	2	0	0	1	0
	G	25.0%	50.0%	0.0%	0.0%	25.0%	0.0%
	D	**1.4%**	**1.4%**	**0.0%**	**0.0%**	**3.1%**	**0.0%**
Give to friends and family	N						
	G						
	D						
Sell online	N						
	G						
	D						
Cash for Clothes shop	N	1	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
High Street take back scheme	N	0	2	0	0	0	0
	G	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.0%**	**1.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
χ^2 36	**df**	35	**Sig.**	0.423			

Table 80. Education Level and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Store them in the loft / garage etc	N	0	0	0	1
	G	0.0%	0.0%	0.0%	100.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.6%**
Recycle them at home as rags / dusters etc	N	1	4	15	21
	G	2.4%	9.8%	36.6%	51.2%
	D	**5.9%**	**7.3%**	**11.9%**	**13.5%**
Bin	N	11	45	90	102
	G	4.4%	18.1%	36.3%	41.1%
	D	**64.7%**	**81.8%**	**71.4%**	**65.8%**
Recycling bank	N	1	4	15	23
	G	2.3%	9.3%	34.9%	53.5%
	D	**5.9%**	**7.3%**	**11.9%**	**14.8%**
Household recycling	N	3	1	3	6
	G	23.1%	7.7%	23.1%	46.2%
	D	**17.6%**	**1.8%**	**2.4%**	**3.9%**
Charity shop	N	1	0	1	2
	G	25.0%	0.0%	25.0%	50.0%
	D	**5.9%**	**0.0%**	**0.8%**	**1.3%**
Give to friends and family	N				
	G				
	D				
Sell online	N				
	G				
	D				
Cash for Clothes shop	N	0	0	1	0
	G	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.8%**	**.0%**
High Street take back scheme	N	0	1	1	0
	G	0.0%	50.0%	50.0%	0.0%
	D	**0.0%**	**1.8%**	**.8%**	**0.0%**
χ^2 26 **df** 21 **Sig.** 0.207					

Table 81. Household Income and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Household income						
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
Store them in the loft / garage etc	N	1	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Recycle them at home as rags / dusters etc	N	4	10	7	10	8	1	1
	G	9.8%	24.4%	17.1%	24.4%	19.5%	2.4%	2.4%
	D	**7.0%**	**14.5%**	**12.1%**	**12.8%**	**17.0%**	**3.8%**	**7.7%**
Bin	N	40	50	44	51	31	18	11
	G	16.3%	20.4%	18.0%	20.8%	12.7%	7.3%	4.5%
	D	**70.2%**	**72.5%**	**75.9%**	**65.4%**	**66.0%**	**69.2%**	**84.6%**
Recycling bank	N	8	7	7	10	4	6	0
	G	19.0%	16.7%	16.7%	23.8%	9.5%	14.3%	0.0%
	D	**14.0%**	**10.1%**	**12.1%**	**12.8%**	**8.5%**	**23.1%**	**0.0%**
Household recycling	N	1	1	0	5	3	1	1
	G	8.3%	8.3%	0.0%	41.7%	25.0%	8.3%	8.3%
	D	**1.8%**	**1.4%**	**0.0%**	**6.4%**	**6.4%**	**3.8%**	**7.7%**
Charity shop	N	1	1	0	2	0	0	0
	G	25.0%	25.0%	0.0%	50.0%	0.0%	0.0%	0.0%
	D	**1.8%**	**1.4%**	**0.0%**	**2.6%**	**0.0%**	**0.0%**	**0.0%**
Give to friends and family	N							
	G							
	D							
Sell online	N							
	G							
	D							
Cash for Clothes shop	N	1	0	0	0	0	0	0
	G	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	D	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
High Street take back scheme	N	1	0	0	0	1	0	0
	G	50.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%
	D	**1.8%**	**0.0%**	**0.0%**	**0.0%**	**2.1%**	**0.0%**	**0.0%**
χ^2 35.8	**df**	42	**Sig.**	0.739				

Table 82. Employment Status and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Employment status								
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other
Store them in the loft / garage etc	N	0	0	0	0	0	0	0	1	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
Recycle them at home as rags / dusters etc	N	17	5	0	1	9	2	0	4	3
	G	41.5%	12.2%	0.0%	2.4%	22.0%	4.9%	0.0%	9.8%	7.3%
	D	**12.4%**	**8.2%**	**0.0%**	**16.7%**	**18.4%**	**25.0%**	**0.0%**	**6.3%**	**21.4%**
Bin	N	94	46	12	3	31	6	1	47	8
	G	37.9%	18.5%	4.8%	1.2%	12.5%	2.4%	0.4%	19.0%	3.2%
	D	**68.6%**	**75.4%**	**92.3%**	**50.0%**	**63.3%**	**75.0%**	**100.0%**	**73.4%**	**57.1%**
Recycling bank	N	21	5	0	0	7	0	0	9	1
	G	48.8%	11.6%	0.0%	0.0%	16.3%	0.0%	0.0%	20.9%	2.3%
	D	**15.3%**	**8.2%**	**0.0%**	**0.0%**	**14.3%**	**0.0%**	**0.0%**	**14.1%**	**7.1%**
Household recycling	N	4	4	0	1	1	0	0	1	2
	G	30.8%	30.8%	0.0%	7.7%	7.7%	0.0%	0.0%	7.7%	15.4%
	D	**2.9%**	**6.6%**	**0.0%**	**16.7%**	**2.0%**	**0.0%**	**0.0%**	**1.6%**	**14.3%**
Charity shop	N	1	1	0	1	1	0	0	0	0
	G	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%
	D	**0.7%**	**1.6%**	**0.0%**	**16.7%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Give to friends and family										
Sell online										
Cash for Clothes shop	N	0	0	0	0	0	0	0	1	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
High Street take back scheme	N	0	0	1	0	0	0	0	1	0
	G	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
	D	**0.0%**	**0.0%**	**7.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**
χ^2 65.3		**df** 56		**Sig.** 0.185						

Table 83. Relationship Status and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
Store them in the loft / garage etc	N	0	0	0	0	0	1	0	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.3%**	**0.0%**	**0.0%**
Recycle them at home as rags / dusters etc	N	12	0	3	2	5	12	6	1
	G	29.3%	0.0%	7.3%	4.9%	12.2%	29.3%	14.6%	2.4%
	D	**11.9%**	**0.0%**	**21.4%**	**40.0%**	**16.7%**	**15.4%**	**5.3%**	**9.1%**
Bin	N	69	1	7	3	20	53	86	9
	G	27.8%	0.4%	2.8%	1.2%	8.1%	21.4%	34.7%	3.6%
	D	**68.3%**	**100.0%**	**50.0%**	**60.0%**	**66.7%**	**67.9%**	**76.1%**	**81.8%**
Recycling bank	N	12	0	2	0	4	10	15	0
	G	27.9%	0.0%	4.7%	0.0%	9.3%	23.3%	34.9%	0.0%
	D	**11.9%**	**0.0%**	**14.3%**	**0.0%**	**13.3%**	**12.8%**	**13.3%**	**0.0%**
Household recycling	N	7	0	2	0	1	1	2	0
	G	53.8%	0.0%	15.4%	0.0%	7.7%	7.7%	15.4%	0.0%
	D	**6.9%**	**0.0%**	**14.3%**	**0.0%**	**3.3%**	**1.3%**	**1.8%**	**0.0%**
Charity shop	N	1	0	0	0	0	1	1	1
	G	25.0%	0.0%	0.0%	0.0%	0.0%	25.0%	25.0%	25.0%
	D	**1.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.3%**	**0.9%**	**9.1%**
Give to friends and family									
Sell online									
Cash for Clothes shop	N	0	0	0	0	0	0	1	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**.9%**	**0.0%**
High Street take back scheme	N	0	0	0	0	0	0	2	0
	G	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
	D	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.8%**	**0.0%**
χ^2 41.4	**df**	49	**Sig.**	0.772					

Table 84. Children at Home and Discarding Socks and Underwear

What do you currently do with socks and underwear that are worn out?		Children at Home		
		Yes	**No**	**Other**
Store them in the loft / garage etc	N	0	1	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**0.4%**	**0.0%**
Recycle them at home as rags / dusters etc	N	13	28	0
	G	31.7%	68.3%	0.0%
	D	**16.5%**	**10.4%**	**0.0%**
Bin	N	52	194	0
	G	21.1%	78.9%	0.0%
	D	**65.8%**	**71.9%**	**0.0%**
Recycling bank	N	8	33	1
	G	19.0%	78.6%	2.4%
	D	**10.1%**	**12.2%**	**100.0%**
Household recycling	N	5	8	0
	G	38.5%	61.5%	0.0%
	D	**6.3%**	**3.0%**	**0.0%**
Charity shop	N	1	3	0
	G	25.0%	75.0%	0.0%
	D	**1.3%**	**1.1%**	**0.0%**
Give to friends and family	N			
	G			
	D			
Sell online	N			
	G			
	D			
Cash for Clothes shop	N	0	1	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**.4%**	**0.0%**
High Street take back scheme	N	0	2	0
	G	0.0%	100.0%	0.0%
	D	**0.0%**	**.7%**	**0.0%**
χ^2 12.9 **df** 14 **Sig.** 0.536				

Table 85. Discarded Clothes and Textiles

Q13. For your clothes and textile that end up in the bin, is this because…	N	%
They are too worn or dirty to be recycled	210	59.5
They wouldn't be worth anything in the charity shop	136	38.5
I never put clothes in the bin	65	18.4
It is the easiest option	62	17.6
I don't know what else to do with them	62	17.6
I don't want anyone else to have to deal with them	42	11.9

10.5.5.4 Crosstabulations for Demographic Variables and Discarded Clothes and Textiles

Demographic variables were also crosstabulated with each of the reasons for clothes and textiles to end up in the bin.

Table 86. Age and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…		**Age**								
		18 - 24	**25 - 34**	**35 - 44**	**45 - 54**	**55 - 64**	**65 +**	**χ^2**	**df**	**Sig.**
It is the easiest option	N	17	24	12	6	2	1	6.1	5	0.294
	G	27.4%	38.7%	19.4%	9.7%	3.2%	1.6%			
	D	**24.3%**	**16.8%**	**21.1%**	**14.3%**	**6.3%**	**11.1%**			
I never put clothes in the bin	N	8	29	9	8	10	1	6.7	5	0.243
	G	12.3%	44.6%	13.8%	12.3%	15.40%	1.5%			
	D	**11.4%**	**20.3%**	**15.8%**	**19%**	**31.0%**	**11.1%**			
They are too worn or dirty to be recycled	N	49	84	32	27	12	6	10.5	5	0.062
	G	23.3%	40%	15.2%	12.9%	5.7%	2.9%			
	D	**70%**	**58.7%**	**56.1%**	**64.3%**	**37.5%**	**66.7%**			
They would not be worth anything in the charity shop	N	34	59	20	12	10	1	9	5	0.107
	G	25%	43.4%	14.7%	8.8%	7.4%	0.7%			
	D	**48.6%**	**41.3%**	**35.1%**	**28.6%**	**31.3%**	**11.1%**			
I don't know what else to do with them	N	16	27	10	4	4	1	4.2	5	0.517
	G	25.8%	43.5%	16.1%	6.5%	6.5%	1.6%			
	D	**22.9%**	**18.9%**	**17.5%**	**9.5%**	**12.5%**	**11.1%**			
I don't want anyone else to have to deal with them	N	6	14	9	6	4	3	6.3	5	0.273
	G	14.3%	33.3%	21.4%	14.3%	9.5%	7.1%			
	D	**8.6%**	**9.8%**	**15.8%**	**14.3%**	**12.5%**	**33.3%**			

Table 87. Education Level and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…	Education Level						
	Secondary school	Sixth form college	University graduate	University post-graduate	χ^2	df	Sig.
It is the easiest option	2	7	19	34	3.9	3	0.276
	3.2%	11.3%	30.6%	54.8%			
	11.8%	**12.7%**	**15.1%**	**21.9%**			
I never put clothes in the bin	5	5	20	35	6.9	3	0.076
	7.7%	7.7%	30.8%	53.8%			
	29.4%	**9.1%**	**15.9%**	**22.6%**			
They are too worn or dirty to be recycled	5	36	84	85	11.3	3	0.01**
	2.4%	17.1%	40%	40.5%			
	29.4%	**65.5%**	**66.7%**	**54.8%**			
They would not be worth anything in the charity shop	7	22	45	62	0.664	3	0.882
	5.1%	16.2%	33.1%	45.6%			
	41.2%	**40%**	**35.7%**	**40%**			
I don't know what else to do with them	2	14	18	28	3.7	3	0.293
	3.2%	22.6%	29%	45.2%			
	11.8%	**25.5%**	**14.3%**	**18.1%**			
I don't want anyone else to have to deal with them	1	9	12	20	2.5	3	0.483
	2.4%	21.4%	28.6%	47.6%			
	5.9%	**16.4%**	**9.5%**	**12.9%**			

Table 88. Household Income and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…		Household income									
		Under £10,000 p.a.	**£10,000 to £20,000 p.a.**	**£20,000 to £30,000 p.a.**	**£30,000 to £50,000 p.a.**	**£50,000 to £70,000 p.a.**	**£70,000 to £100,000 p.a.**	**£100,000+ p.a.**	**χ^2**	**df**	**Sig.**
It is the easiest option	N	13	11	6	14	9	4	5	7.3	6	0.295
	G	21.0%	17.7%	9.7%	22.6%	14.5%	6.5%	8.1%			
	D	**22.8%**	**15.9%**	**10.3%**	**17.9%**	**19.1%**	**15.4%**	**38.5%**			
I never put clothes in the bin	N	10	14	7	15	9	7	1	4.1	6	0.667
	G	15.9%	22.2%	11.1%	23.8%	14.3%	11.1%	1.6%			
	D	**17.5%**	**20.3%**	**12.1%**	**19.2%**	**19.1%**	**26.9%**	**7.7%**			
They are too worn or dirty to be recycled	N	35	41	42	43	28	13	6	6.6	6	0.354
	G	16.8%	19.7%	20.2%	20.7%	13.5%	6.3%	2.9%			
	D	**61.4%**	**59.4%**	**72.4%**	**55.1%**	**59.6%**	**50.0%**	**46.2%**			
They would not be worth anything in the charity shop	N	22	29	23	31	19	6	6	3.4	6	0.759
	G	16.2%	21.3%	16.9%	22.8%	14.0%	4.4%	4.4%			
	D	**38.6%**	**42.0%**	**39.7%**	**39.7%**	**40.4%**	**23.1%**	**46.2%**			
I don't know what else to do with them	N	13	12	6	16	7	7	1	6.2	6	0.398
	G	21.0%	19.4%	9.7%	25.8%	11.3%	11.3%	1.6%			
	D	**22.8%**	**17.4%**	**10.3%**	**20.5%**	**14.9%**	**26.9%**	**7.7%**			
I don't want anyone else to have to deal with them	N	7	4	9	10	7	2	2	4.3	6	0.640
	G	17.1%	9.8%	22.0%	24.4%	17.1%	4.9%	4.9%			
	D	**12.3%**	**5.8%**	**15.5%**	**12.8%**	**14.9%**	**7.7%**	**15.4%**			

Table 89. Employment Status and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…		Employment status									χ^2	df	Sig.
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other			
It is the easiest option	N	25	9	6	1	4	0	1	13	3	17.6	8	0.025*
	G	40.3%	14.5%	9.7%	1.6%	6.5%	0.0%	1.6%	21.0%	4.8%			
	D	**18.2%**	**14.8%**	**46.2%**	**16.7%**	**8.2%**	**0.0%**	**100.0%**	**20.3%**	**21.4%**			
I never put clothes in the bin	N	25	11	0	2	12	2	0	9	4	7.3	8	0.509
	G	38.5%	16.9%	0.0%	3.1%	18.5%	3.1%	0.0%	13.8%	6.2%			
	D	**18.2%**	**18.0%**	**0.0%**	**33.3%**	**24.5%**	**25.0%**	**0.0%**	**14.1%**	**28.6%**			
They are too worn or dirty to be recycled	N	74	36	8	3	27	5	1	47	9	8.4	8	0.399
	G	35.2%	17.1%	3.8%	1.4%	12.9%	2.4%	0.5%	22.4%	4.3%			
	D	**54.0%**	**59.0%**	**61.5%**	**50.0%**	**55.1%**	**62.5%**	**100.0%**	**73.4%**	**64.3%**			
They would not be worth anything in the charity shop	N	54	24	6	2	15	2	1	26	6	4.2	8	0.840
	G	39.7%	17.6%	4.4%	1.5%	11.0%	1.5%	0.7%	19.1%	4.4%			
	D	**39.4%**	**39.3%**	**46.2%**	**33.3%**	**30.6%**	**25.0%**	**100.0%**	**40.6%**	**42.9%**			
I don't know what else to do with them	N	26	6	5	0	5	0	1	15	4	18.8	8	0.016*
	G	41.9%	9.7%	8.1%	0.0%	8.1%	0.0%	1.6%	24.2%	6.5%			
	D	**19.0%**	**9.8%**	**38.5%**	**0.0%**	**10.2%**	**0.0%**	**100.0%**	**23.4%**	**28.6%**			
I don't want anyone else to have to deal with them	N	17	9	3	1	6	0	0	5	1	4.7	8	0.786
	G	40.5%	21.4%	7.1%	2.4%	14.3%	0.0%	0.0%	11.9%	2.4%			
	D	**12.4%**	**14.8%**	**23.1%**	**16.7%**	**12.2%**	**0.0%**	**0.0%**	**7.8%**	**7.1%**			

Table 90. Relationship Status and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…		Relationship status								χ^2	df	Sig.
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other			
It is the easiest option	N	15	0	2	0	4	15	26	0	7.1	7	0.421
	G	24.2%	0.0%	3.2%	0.0%	6.5%	24.2%	41.9%	0.0%			
	D	**14.9%**	**0.0%**	**14.3%**	**0.0%**	**13.3%**	**19.2%**	**23.0%**	**0.0%**			
I never put clothes in the bin	N	22	0	4	1	6	14	16	2	3.4	7	0.848
	G	33.8%	0.0%	6.2%	1.5%	9.2%	21.5%	24.6%	3.1%			
	D	**21.8%**	**0.0%**	**28.6%**	**20.0%**	**20.0%**	**17.9%**	**14.2%**	**18.2%**			
They are too worn or dirty to be recycled	N	56	0	6	2	18	48	74	6	6.5	7	0.484
	G	26.7%	0.0%	2.9%	1.0%	8.6%	22.9%	35.2%	2.9%			
	D	**55.4%**	**0.0%**	**42.9%**	**40.0%**	**60.0%**	**61.5%**	**65.5%**	**54.5%**			
They would not be worth anything in the charity shop	N	34	0	3	2	12	32	48	5	4.6	7	0.712
	G	25.0%	0.0%	2.2%	1.5%	8.8%	23.5%	35.3%	3.7%			
	D	**33.7%**	**0.0%**	**21.4%**	**40.0%**	**40.0%**	**41.0%**	**42.5%**	**45.5%**			
I don't know what else to do with them	N	15	0	2	1	5	11	27	1	5.2	7	0.637
	G	24.2%	0.0%	3.2%	1.6%	8.1%	17.7%	43.5%	1.6%			
	D	**14.9%**	**0.0%**	**14.3%**	**20.0%**	**16.7%**	**14.1%**	**23.9%**	**9.1%**			
I don't want anyone else to have to deal with them	N	10	1	1	1	3	11	15	0	10.6	7	0.159
	G	23.8%	2.4%	2.4%	2.4%	7.1%	26.2%	35.7%	0.0%			
	D	**9.9%**	**100.0%**	**7.1%**	**20.0%**	**10.0%**	**14.1%**	**13.3%**	**0.0%**			

Table 91. Children at Home and Clothes and Textiles in the Bin

For your clothes and textile that end up in the bin, is this because…		Children at Home					
		Yes	**No**	**Other**	**χ^2**	**df**	**Sig.**
It is the easiest option	N	15	46	0	0.373	2	0.830
	G	24.6%	75.4%	0.0%			
	D	**19.0%**	**17.0%**	**0.0%**			
I never put clothes in the bin	N	20	44	1	7.7	2	0.021*
	G	30.8%	67.7%	1.5%			
	D	**25.3%**	**16.3%**	**100.0%**			
They are too worn or dirty to be recycled	N	43	165	0	2.6	2	0.272
	G	20.7%	79.3%	0.0%			
	D	**54.4%**	**61.1%**	**0.0%**			
They would not be worth anything in the charity shop	N	28	107	0	1.1	2	0.582
	G	20.7%	79.3%	0.0%			
	D	**35.4%**	**39.6%**	**0.0%**			
I don't know what else to do with them	N	13	49	0	0.336	2	0.845
	G	21.0%	79.0%	0.0%			
	D	**16.5%**	**18.1%**	**0.0%**			
I don't want anyone else to have to deal with them	N	9	32	0	0.146	2	0.93
	G	22.0%	78.0%	0.0%			
	D	**11.4%**	**11.9%**	**0.0%**			

Table 92. Donated Clothes and Textiles

Q14.If you have taken clothes to a charity shop or textile bank how long did it take you to get there?	**N**	**%**
10 minutes	212	60.1
30 minutes	68	19.3
2 minutes	47	13.3
I never do this	19	5.4
More than 40 minutes	7	2
TOTAL	353	100
Q15. Did you find it convenient to get to the textile bank or charity shop?	**N**	**%**
Yes	282	79.9
No	71	20.1
TOTAL	353	100

Table 93. Convenience and Donation of Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		If you have taken clothes to a charity shop or textile bank how long did it take you to get there?				
		2 minutes	10 minutes	30 minutes	More than 40 minutes	I never do this
Yes	N	46	193	36	3	4
	G	16.3%	68.4%	12.8%	1.1%	1.4%
	D	**97.9%**	**91.0%**	**52.9%**	**42.9%**	**21.1%**
No	N	1	19	32	4	15
	G	1.4%	26.8%	45.1%	5.6%	21.1%
	D	**2.1%**	**9.0%**	**47.1%**	**57.1%**	**78.9%**
χ^2 103.5		**df** 4		**Sig.** 0.000***		

10.5.5.5 Crosstabulations for Demographic Variables and Donated Clothes and Textiles

For the crosstabulations of demographic variables and donating clothes and textiles, no statistically significant relationships were found. Results reflected the overall frequencies, in which 10 minutes was the most common time taken to donate clothes and textiles in a responsible way.

Table 94. Age and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
2 minutes	N	10	17	10	6	4	0
	G	21.30%	36.20%	21.30%	12.80%	8.50%	0.00%
	D	**14.30%**	**11.90%**	**17.50%**	**14.30%**	**12.50%**	**0.00%**
10 minutes	N	42	81	31	27	22	9
	G	19.80%	38.20%	14.60%	12.70%	10.40%	4.20%
	D	**60.00%**	**56.60%**	**54.40%**	**64.30%**	**68.80%**	**100.00%**
30 minutes	N	10	36	10	7	5	0
	G	14.70%	52.90%	14.70%	10.30%	7.40%	0.00%
	D	**14.30%**	**25.20%**	**17.50%**	**16.70%**	**15.60%**	**0.00%**
More than 40 minutes	N	1	1	3	1	1	0
	G	14.30%	14.30%	42.90%	14.30%	14.30%	0.00%
	D	**1.40%**	**0.70%**	**5.30%**	**2.40%**	**3.10%**	**0.00%**
I never do this	N	7	8	3	1	0	0
	G	36.80%	42.10%	15.80%	5.30%	0.00%	0.00%
	D	**10.00%**	**5.60%**	**5.30%**	**2.40%**	**0.00%**	**0.00%**
χ^2 22	**df** 20	**Sig.** 0.342					

Table 95. Age and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Age					
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +
Yes	N	55	117	44	32	25	9
	G	19.50%	41.50%	15.60%	11.30%	8.90%	3.20%
	D	**78.60%**	**81.80%**	**77.20%**	**76.20%**	**78.10%**	**100.00%**
No	N	15	26	13	10	7	0
	G	21.10%	36.60%	18.30%	14.10%	9.90%	0.00%
	D	**21.40%**	**18.20%**	**22.80%**	**23.80%**	**21.90%**	**0.00%**
χ^2 3.4	**df**	5	**Sig.**	0.646			

Table 96. Education Level and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
2 minutes	N	3	8	20	16
	G	6.40%	17.00%	42.60%	34.00%
	D	**17.60%**	**14.50%**	**15.90%**	**10.30%**
10 minutes	N	12	35	74	91
	G	5.70%	16.50%	34.90%	42.90%
	D	**70.60%**	**63.60%**	**58.70%**	**58.70%**
30 minutes	N	0	10	24	34
	G	0.00%	14.70%	35.30%	50.00%
	D	**0.00%**	**18.20%**	**19.00%**	**21.90%**
More than 40 minutes	N	0	2	1	4
	G	0.00%	28.60%	14.30%	57.10%
	D	**0.00%**	**3.60%**	**0.80%**	**2.60%**
I never do this	N	2	0	7	10
	G	10.50%	0.00%	36.80%	52.60%
	D	**11.80%**	**0.00%**	**5.60%**	**6.50%**
χ^2 13.2	**df**	12	**Sig.**	0.353	

Table 97. Education Level and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Education Level			
		Secondary school	Sixth form college	University graduate	University post-graduate
Yes	N	14	46	104	118
	G	5.00%	16.30%	36.90%	41.80%
	D	**82.40%**	**83.60%**	**82.50%**	**76.10%**
No	N	3	9	22	37
	G	4.20%	12.70%	31.00%	52.10%
	D	**17.60%**	**16.40%**	**17.50%**	**23.90%**
χ^2 2.5	**df**	3	**Sig.**	0.483	

Table 98. Household Income and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Household income						
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
2 minutes	N	5	8	8	11	10	1	3
	G	10.90%	17.40%	17.40%	23.90%	21.70%	2.20%	6.50%
	D	**8.80%**	**11.60%**	**13.80%**	**14.10%**	**21.30%**	**3.80%**	**23.10%**
10 minutes	N	31	39	33	48	29	21	8
	G	14.80%	18.70%	15.80%	23.00%	13.90%	10.00%	3.80%
	D	**54.40%**	**56.50%**	**56.90%**	**61.50%**	**61.70%**	**80.80%**	**61.50%**
30 minutes	N	11	19	12	14	7	2	2
	G	16.40%	28.40%	17.90%	20.90%	10.40%	3.00%	3.00%
	D	**19.30%**	**27.50%**	**20.70%**	**17.90%**	**14.90%**	**7.70%**	**15.40%**
More than 40 minutes	N	4	0	1	1	1	0	0
	G	57.10%	0.00%	14.30%	14.30%	14.30%	0.00%	0.00%
	D	**7.00%**	**0.00%**	**1.70%**	**1.30%**	**2.10%**	**0.00%**	**0.00%**
I never do this	N	6	3	4	4	0	2	0
	G	31.60%	15.80%	21.10%	21.10%	0.00%	10.50%	0.00%
	D	**10.50%**	**4.30%**	**6.90%**	**5.10%**	**0.00%**	**7.70%**	**0.00%**
χ^2 29.6	**df**	24	**Sig.**	0.200				

Table 99. Household Income and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Household income						
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.
Yes	N	44	56	46	62	38	21	11
	G	15.80%	20.10%	16.50%	22.30%	13.70%	7.60%	4.00%
	D	**77.20%**	**81.20%**	**79.30%**	**79.50%**	**80.90%**	**80.80%**	**84.60%**
No	N	13	13	12	16	9	5	2
	G	18.60%	18.60%	17.10%	22.90%	12.90%	7.10%	2.90%
	D	**22.80%**	**18.80%**	**20.70%**	**20.50%**	**19.10%**	**19.20%**	**15.40%**
χ^2 0.567	**df**	6	**Sig.**	0.997				

Table 100. Employment Status and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Employment status								
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other
2 minutes	N	17	7	3	1	6	1	0	9	3
	G	36.20%	14.90%	6.40%	2.10%	12.80%	2.10%	0.00%	19.10%	6.40%
	D	**12.40%**	**11.50%**	**23.10%**	**16.70%**	**12.20%**	**12.50%**	**0.00%**	**14.10%**	**21.40%**
10 minutes	N	82	34	6	3	33	6	1	37	10
	G	38.70%	16.00%	2.80%	1.40%	15.60%	2.80%	0.50%	17.50%	4.70%
	D	**59.90%**	**55.70%**	**46.20%**	**50.00%**	**67.30%**	**75.00%**	**100.00%**	**57.80%**	**71.40%**
30 minutes	N	28	15	2	1	9	1	0	11	1
	G	41.20%	22.10%	2.90%	1.50%	13.20%	1.50%	0.00%	16.20%	1.50%
	D	**20.40%**	**24.60%**	**15.40%**	**16.70%**	**18.40%**	**12.50%**	**0.00%**	**17.20%**	**7.10%**
More than 40 minutes	N	3	0	1	0	1	0	0	2	0
	G	42.90%	0.00%	14.30%	0.00%	14.30%	0.00%	0.00%	28.60%	0.00%
	D	**2.20%**	**0.00%**	**7.70%**	**0.00%**	**2.00%**	**0.00%**	**0.00%**	**3.10%**	**0.00%**
I never do this	N	7	5	1	1	0	0	0	5	0
	G	36.80%	26.30%	5.30%	5.30%	0.00%	0.00%	0.00%	26.30%	0.00%
	D	**5.10%**	**8.20%**	**7.70%**	**16.70%**	**0.00%**	**0.00%**	**0.00%**	**7.80%**	**0.00%**
χ^2 18.3	**df**	32	**Sig.**	0.975						

Table 101. Employment Status and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Employment status								
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other
Yes	N	101	49	10	5	42	8	1	52	14
	G	35.80%	17.40%	3.50%	1.80%	14.90%	2.80%	0.40%	18.40%	5.00%
	D	**73.70%**	**80.30%**	**76.90%**	**83.30%**	**85.70%**	**100.00%**	**100.00%**	**81.30%**	**100.00%**
No	N	101	49	10	5	42	8	1	52	14
	G	50.70%	16.90%	4.20%	1.40%	9.90%	0.00%	0.00%	16.90%	0.00%
	D	**26.30%**	**19.70%**	**23.10%**	**16.70%**	**14.30%**	**0.00%**	**0.00%**	**18.80%**	**0.00%**
χ^2 10.3	**df**	8	**Sig.**	0.247						

Table 102. Relationship Status and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
2 minutes	N	14	0	0	1	7	8	14	3
	G	29.80%	0.00%	0.00%	2.10%	14.90%	17.00%	29.80%	6.40%
	D	**13.90%**	**0.00%**	**0.00%**	**20.00%**	**23.30%**	**10.30%**	**12.40%**	**27.30%**
10 minutes	N	66	1	11	4	13	50	62	5
	G	31.10%	0.50%	5.20%	1.90%	6.10%	23.60%	29.20%	2.40%
	D	**65.30%**	**100.00%**	**78.60%**	**80.00%**	**43.30%**	**64.10%**	**54.90%**	**45.50%**
30 minutes	N	16	0	3	0	7	18	23	1
	G	23.50%	0.00%	4.40%	0.00%	10.30%	26.50%	33.80%	1.50%
	D	**15.80%**	**0.00%**	**21.40%**	**0.00%**	**23.30%**	**23.10%**	**20.40%**	**9.10%**
More than 40 minutes	N	2	0	0	0	1	1	3	0
	G	28.60%	0.00%	0.00%	0.00%	14.30%	14.30%	42.90%	0.00%
	D	**2.00%**	**0.00%**	**0.00%**	**0.00%**	**3.30%**	**1.30%**	**2.70%**	**0.00%**
I never do this	N	3	0	0	0	2	1	11	2
	G	15.80%	0.00%	0.00%	0.00%	10.50%	5.30%	57.90%	10.50%
	D	**3.00%**	**0.00%**	**0.00%**	**0.00%**	**6.70%**	**1.30%**	**9.70%**	**18.20%**
χ^2 27.7	**df**	28	**Sig.**	0.479					

Table 103. Relationship Status and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Relationship status							
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other
Yes	N	87	0	12	4	21	63	87	8
	G	30.90%	0.00%	4.30%	1.40%	7.40%	22.30%	30.90%	2.80%
	D	**86.10%**	**0.00%**	**85.70%**	**80.00%**	**70.00%**	**80.80%**	**77.00%**	**72.70%**
No	N	14	1	2	1	9	15	26	3
	G	19.70%	1.40%	2.80%	1.40%	12.70%	21.10%	36.60%	4.20%
	D	**13.90%**	**100.00%**	**14.30%**	**20.00%**	**30.00%**	**19.20%**	**23.00%**	**27.30%**
χ^2 9.5	**df**	7	**Sig.**	0.217					

Table 104. Children at Home and Donating Clothes and Textiles

If you have taken clothes to a charity shop or textile bank how long did it take you to get there?		Children at Home		
		Yes	No	Other
2 minutes	N	12	35	0
	G	25.50%	74.50%	0.00%
	D	**15.20%**	**13.00%**	**0.00%**
10 minutes	N	52	157	1
	G	24.80%	74.80%	0.50%
	D	**65.80%**	**58.10%**	**100.00%**
30 minutes	N	11	57	0
	G	16.20%	83.80%	0.00%
	D	**13.90%**	**21.10%**	**0.00%**
More than 40 minutes	N	1	5	0
	G	16.70%	83.30%	0.00%
	D	**1.30%**	**1.90%**	**0.00%**
I never do this	N	3	16	0
	G	15.80%	84.20%	0.00%
	D	**3.80%**	**5.90%**	**0.00%**
χ^2 3.8 **df** 8 **Sig.** 0.879				

Table 105. Children at Home and Convenience of Donating Clothes and Textiles

Did you find it convenient to get to the textile bank or charity shop?		Children at Home		
		Yes	No	Other
Yes	N	66	214	1
	G	23.50%	76.20%	0.40%
	D	**83.50%**	**79.30%**	**100.00%**
No	N	13	56	0
	G	18.80%	81.20%	0.00%
	D	**16.50%**	**20.70%**	**0.00%**
χ^2 0.955 **df** 2 **Sig.** 0.620				

10.5.5.6 Garment Use and Divestment Phase Graphs and Charts

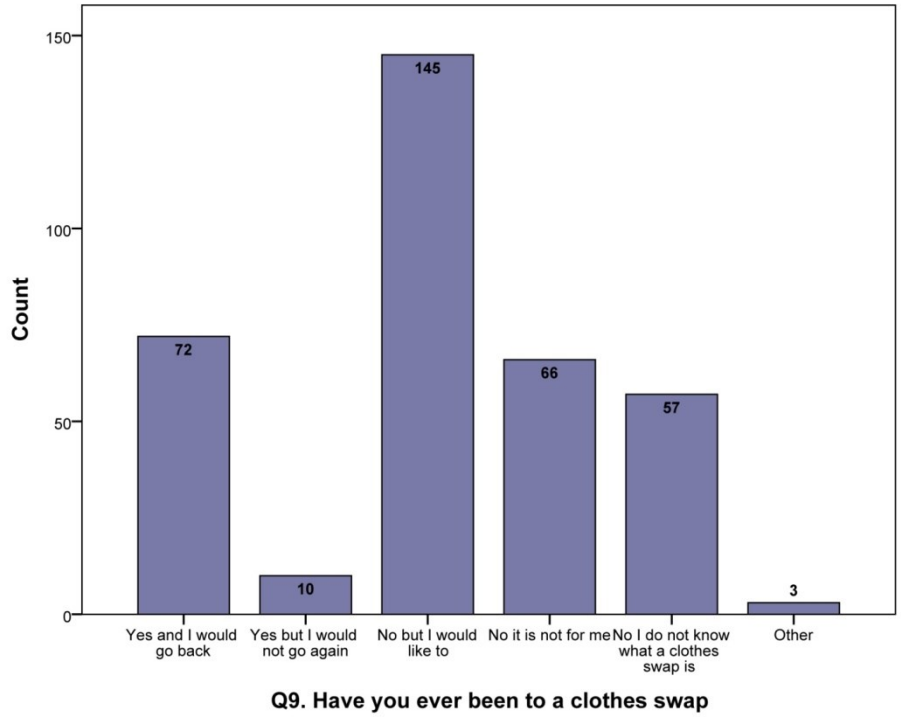


Figure 160. Q9. Have you ever been to a clothes swap?

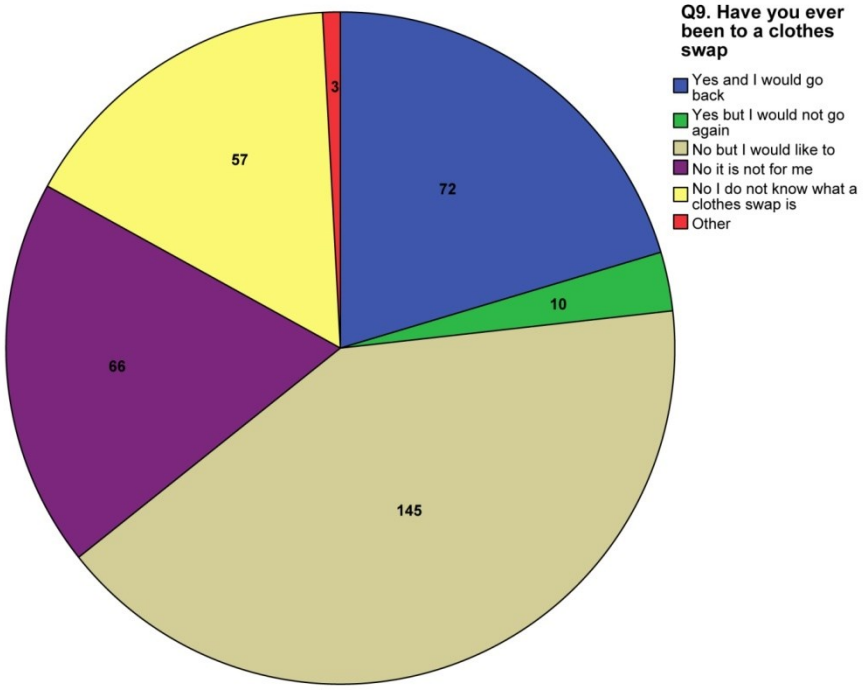


Figure 161. Q9. Have you ever been to a clothes swap?

Q10. When my clothes wear out or break I...

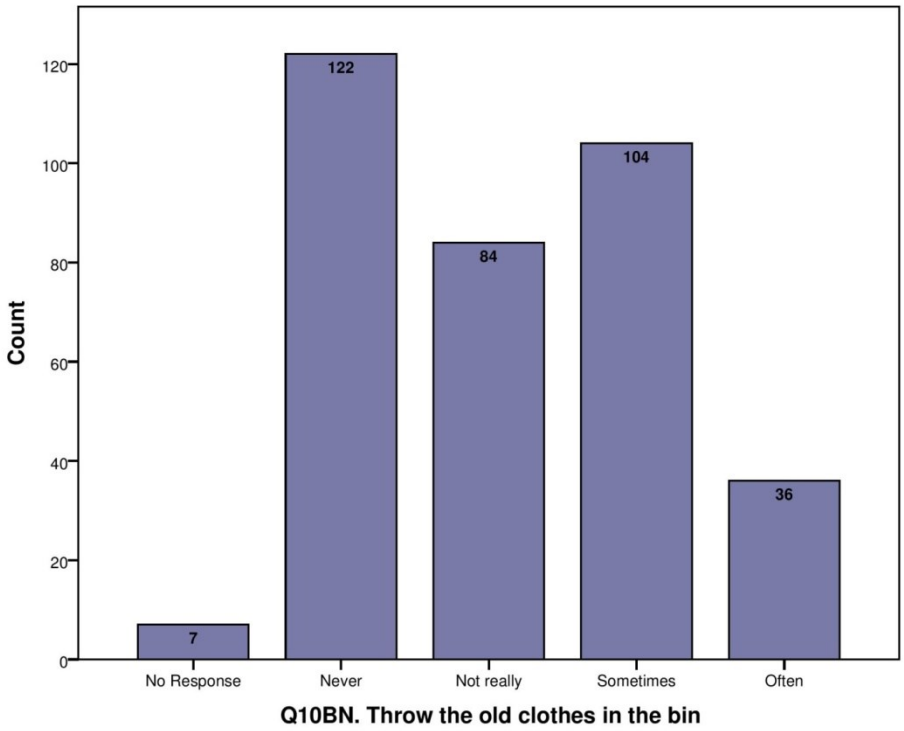


Figure 162. Q10BN. Thrown the old clothes in the bin

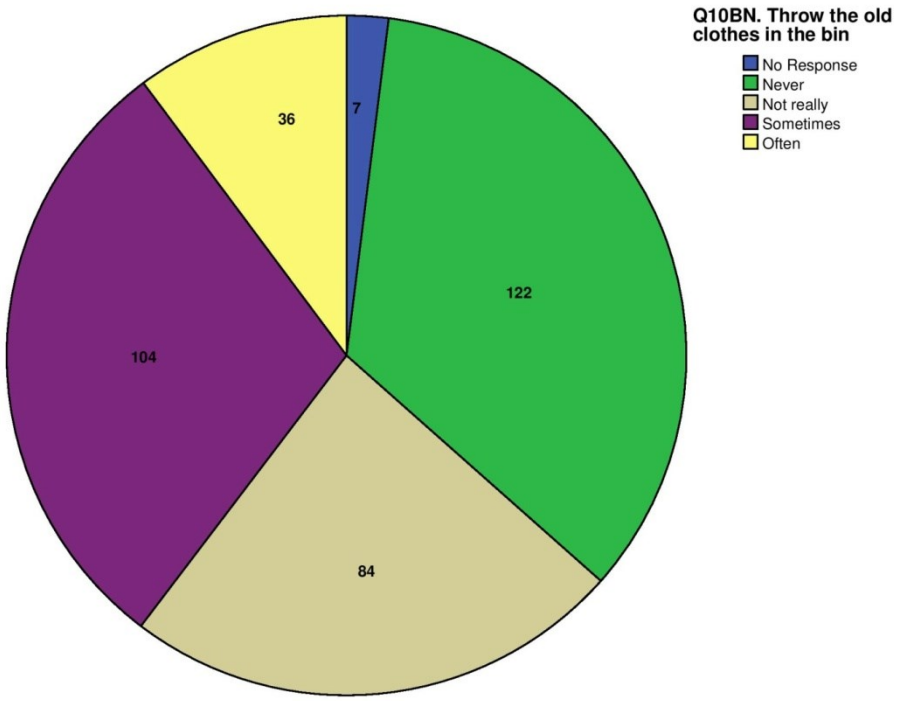


Figure 163. Q10BN. Thrown the old clothes in the bin

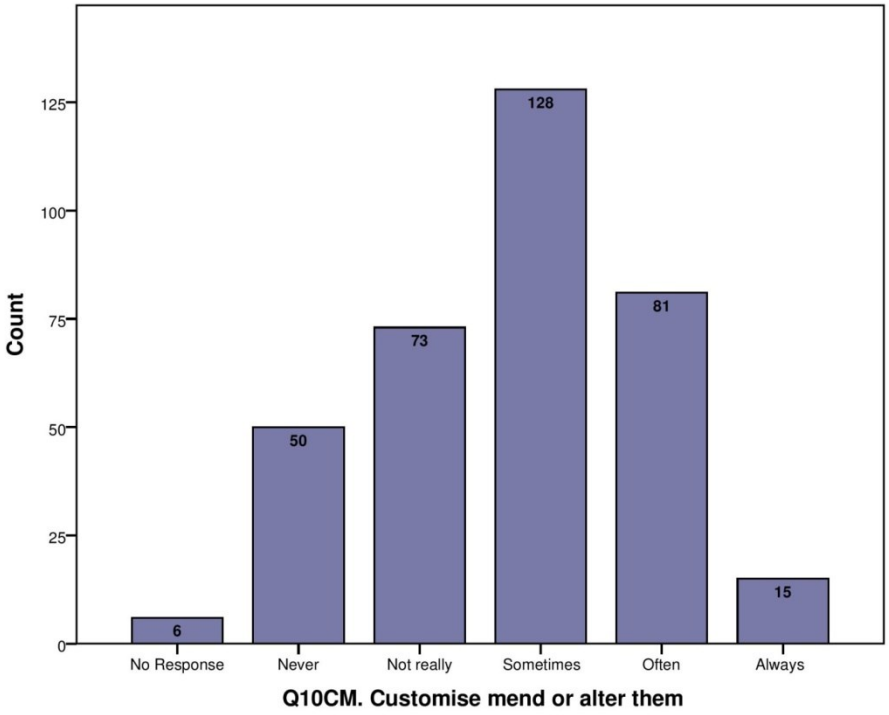


Figure 164. Q10CM. Customise, mend or alter them

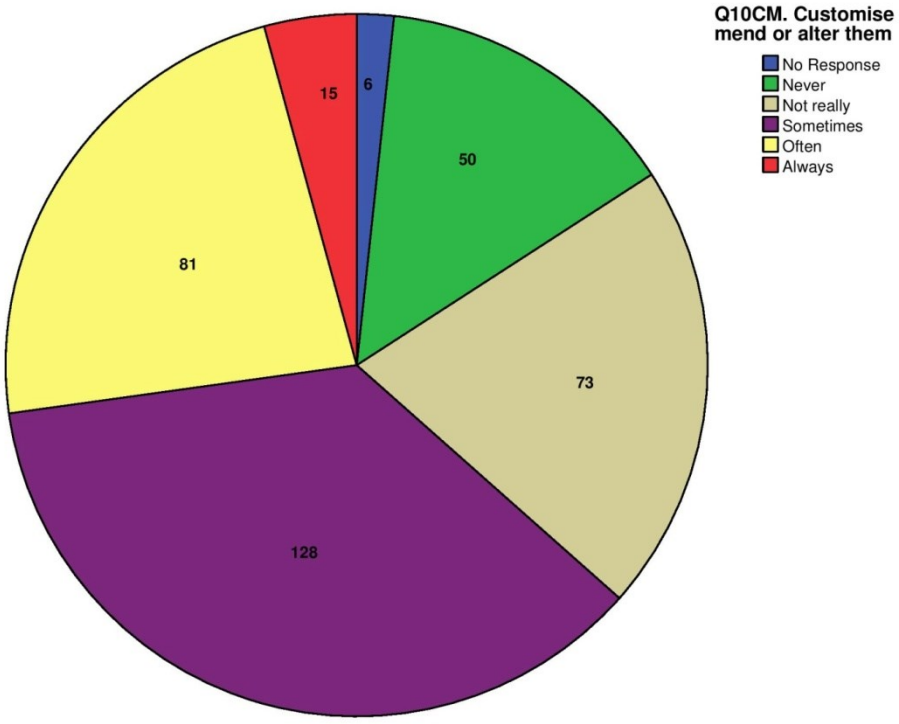


Figure 165. Q10CM. Customise, mend or alter them

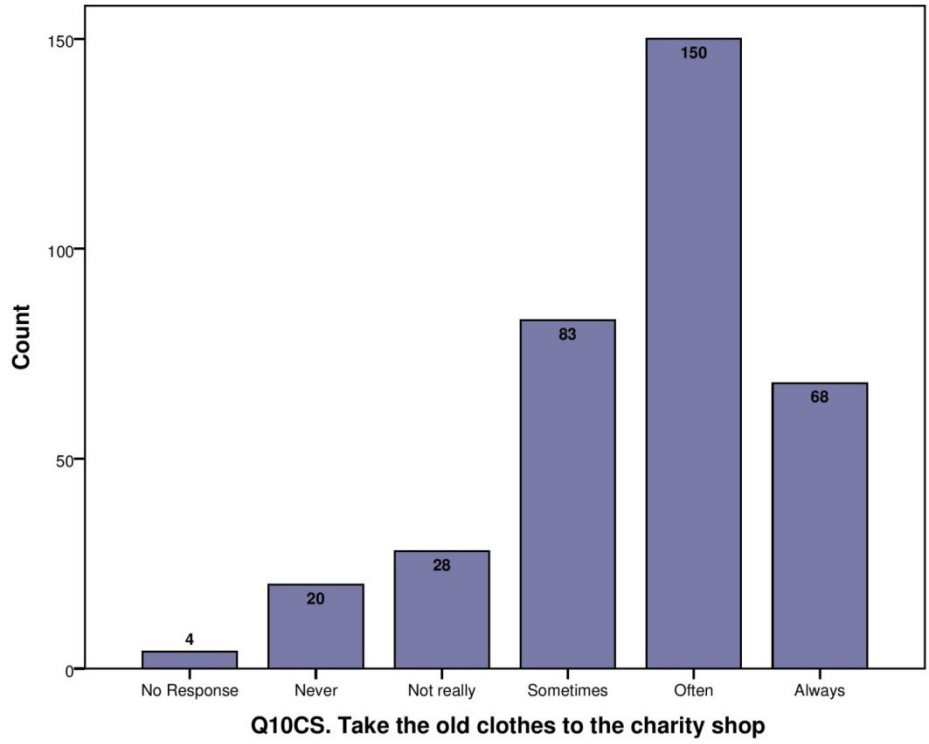


Figure 166. Q10CS. Take the old clothes to the charity shop

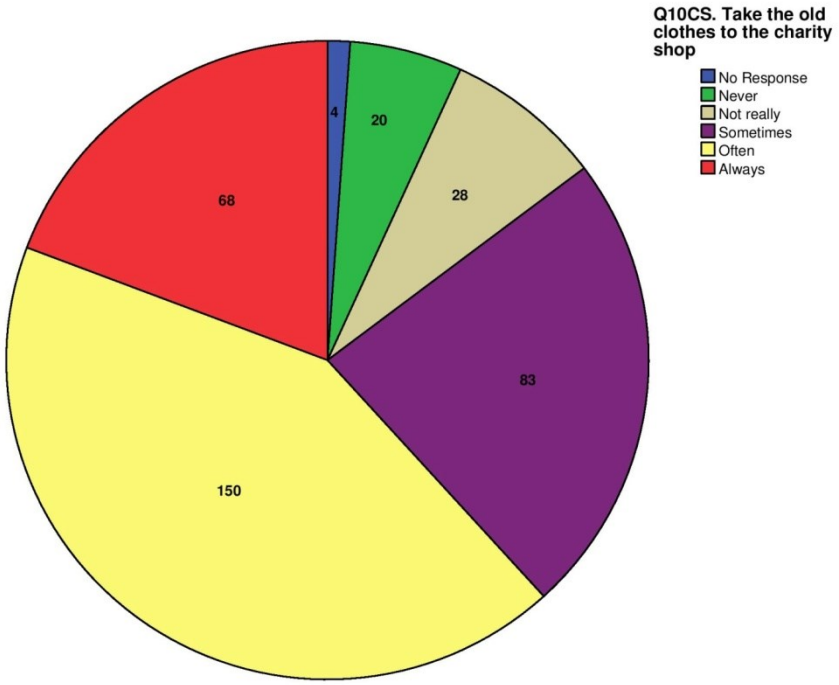


Figure 167. Q10CS. Take the old clothes to the charity shop

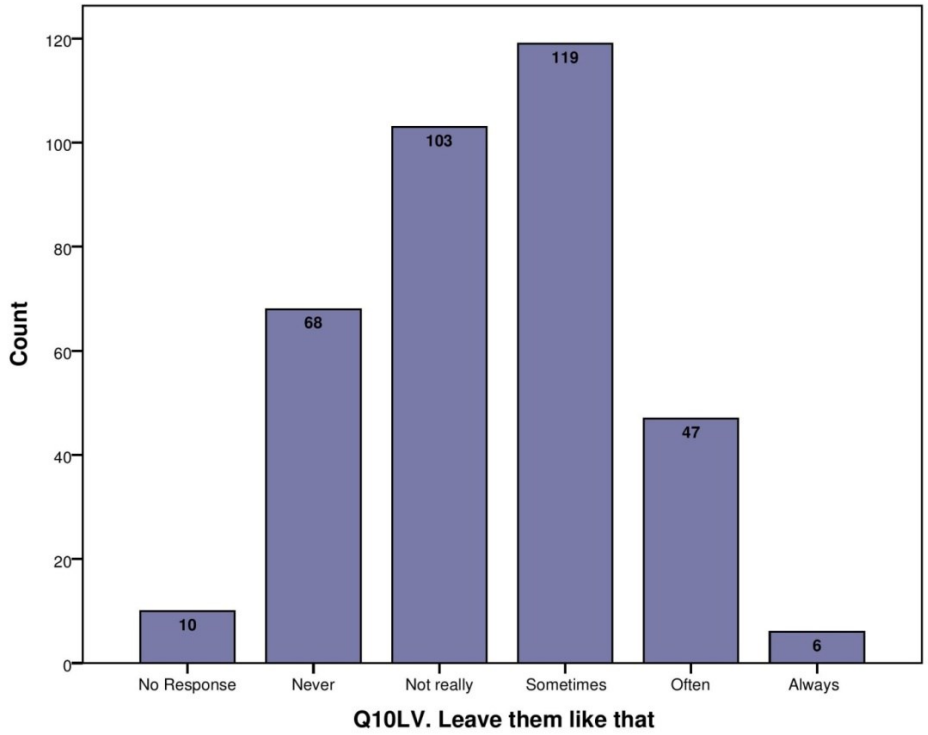


Figure 168. Q10LV. Leave them like that

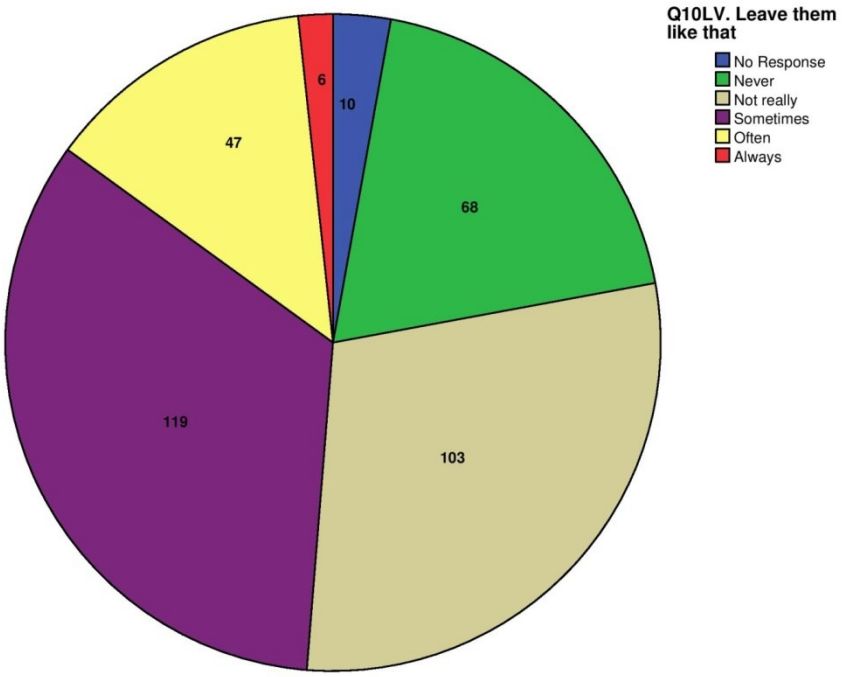


Figure 169. Q10LV. Leave them like that

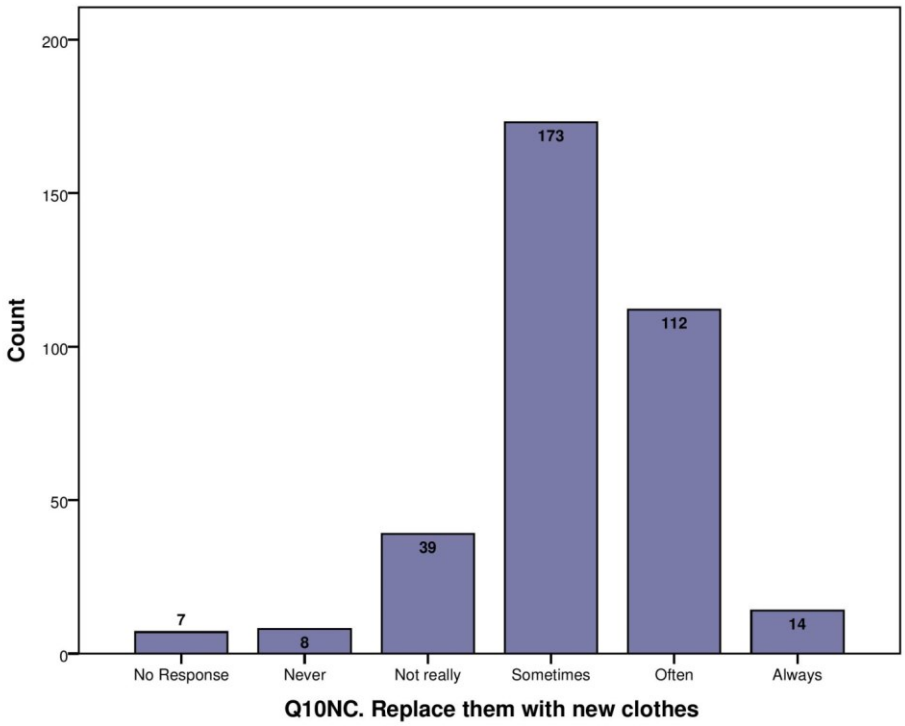


Figure 170. Q10NC. Replace them with new clothes

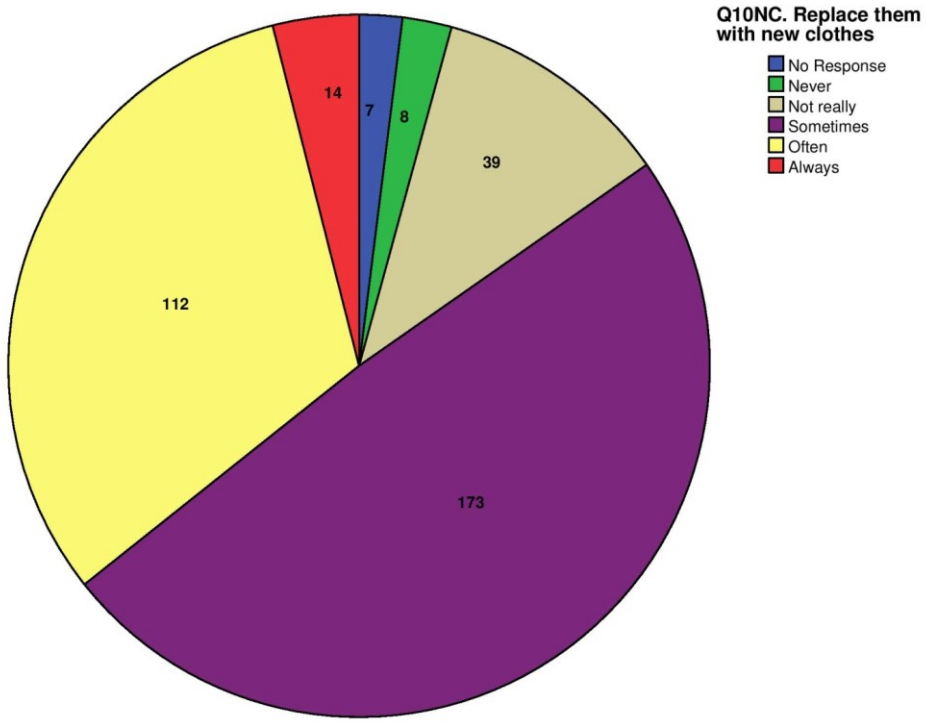


Figure 171. Q10NC. Replace them with new clothes

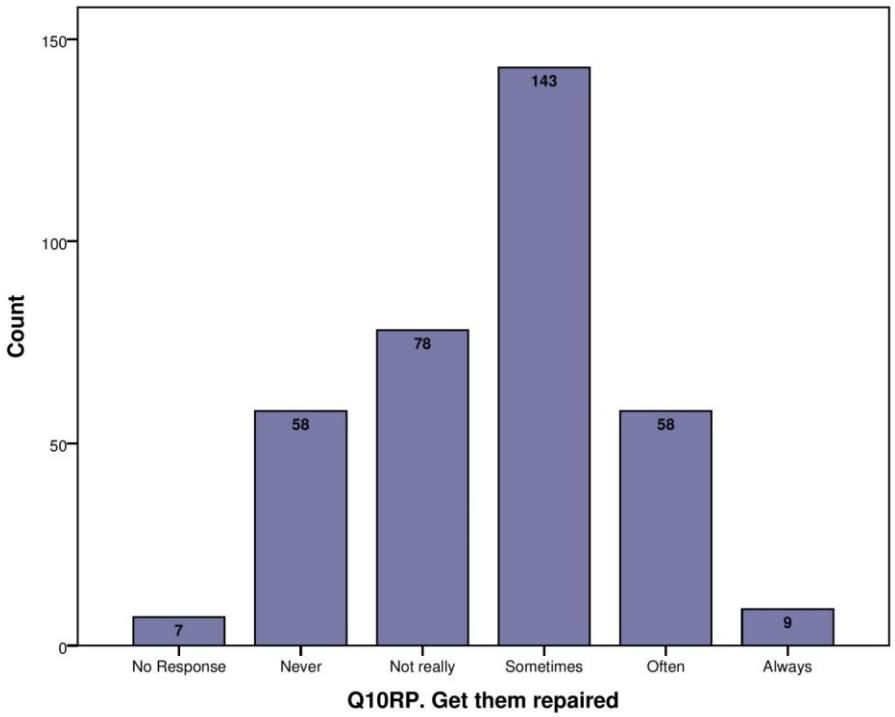


Figure 172. Q10RP. Get them repaired

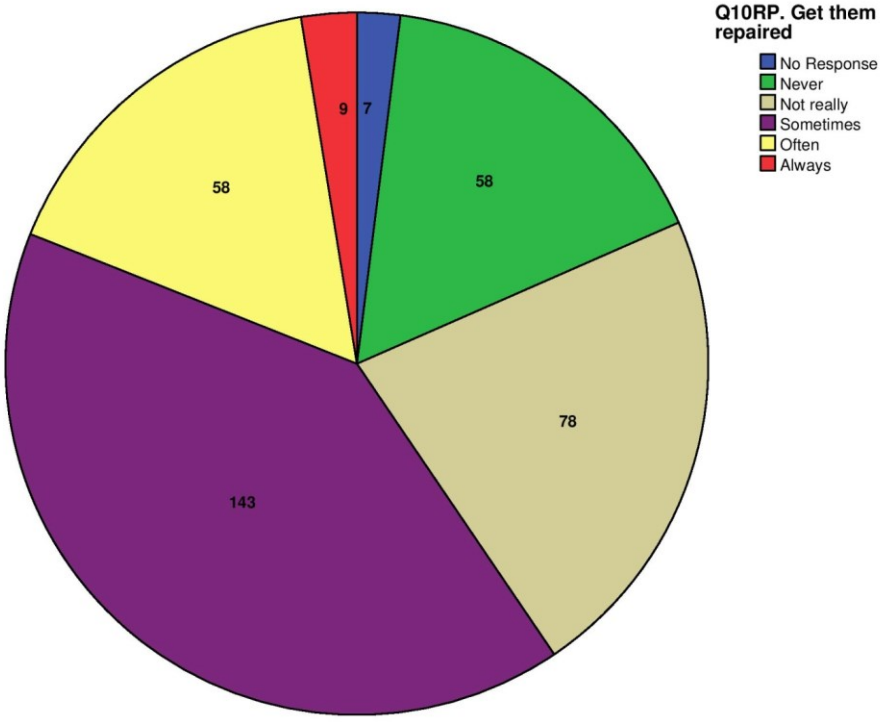


Figure 173. Q10RP. Get them repaired

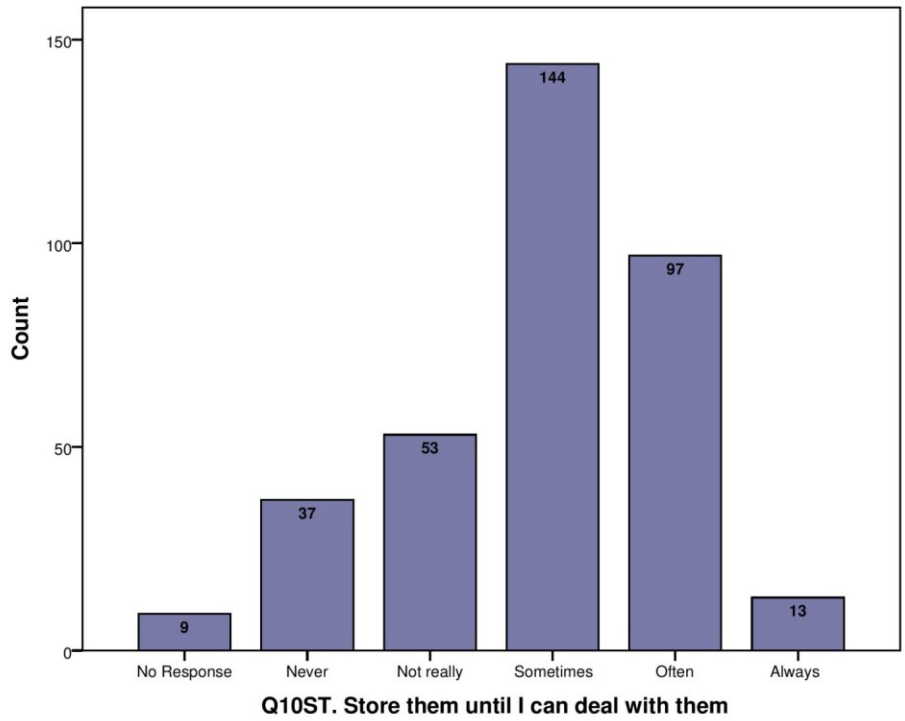


Figure 174. Q10ST. Store them until I can deal with them

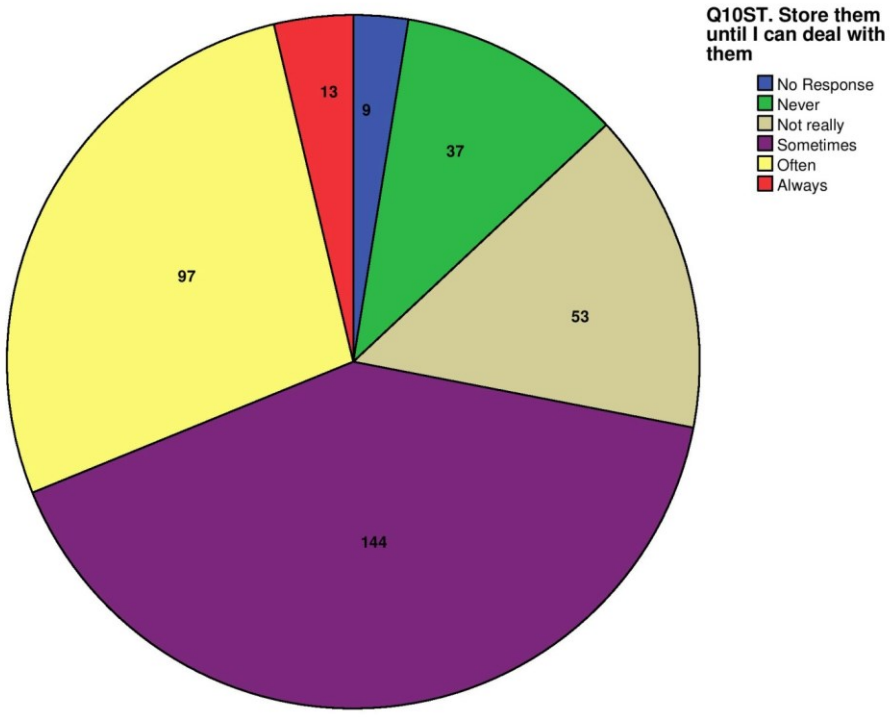


Figure 175. Q10ST. Store them until I can deal with them

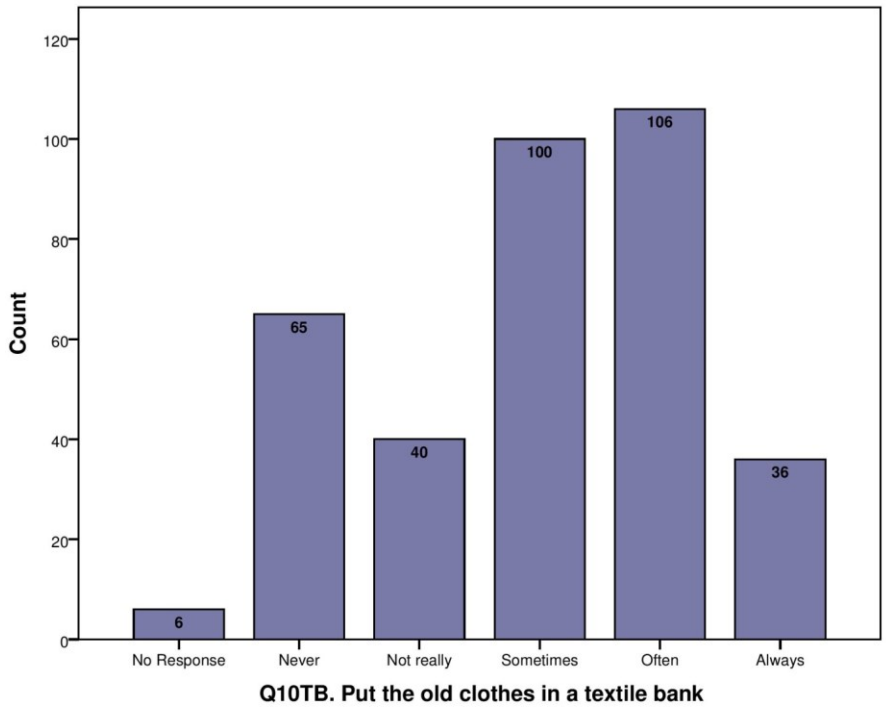


Figure 176. Q10TB. Put the old clothes in a textile bank

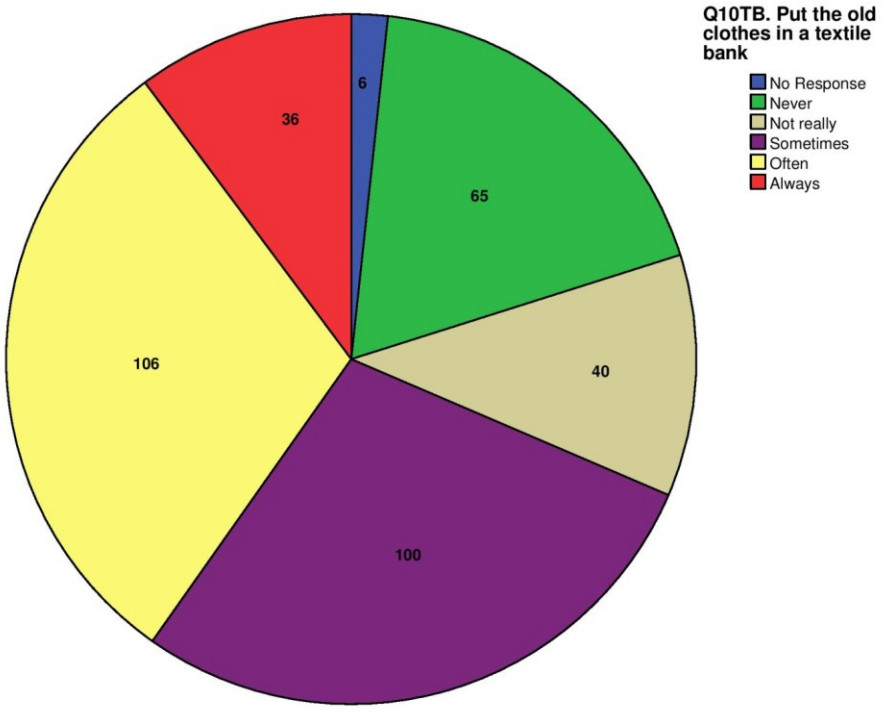


Figure 177. Q10TB. Put the old clothes in a textile bank

Q11. When I am bored of my clothes, they don't fit or I don't like them anymore, I...

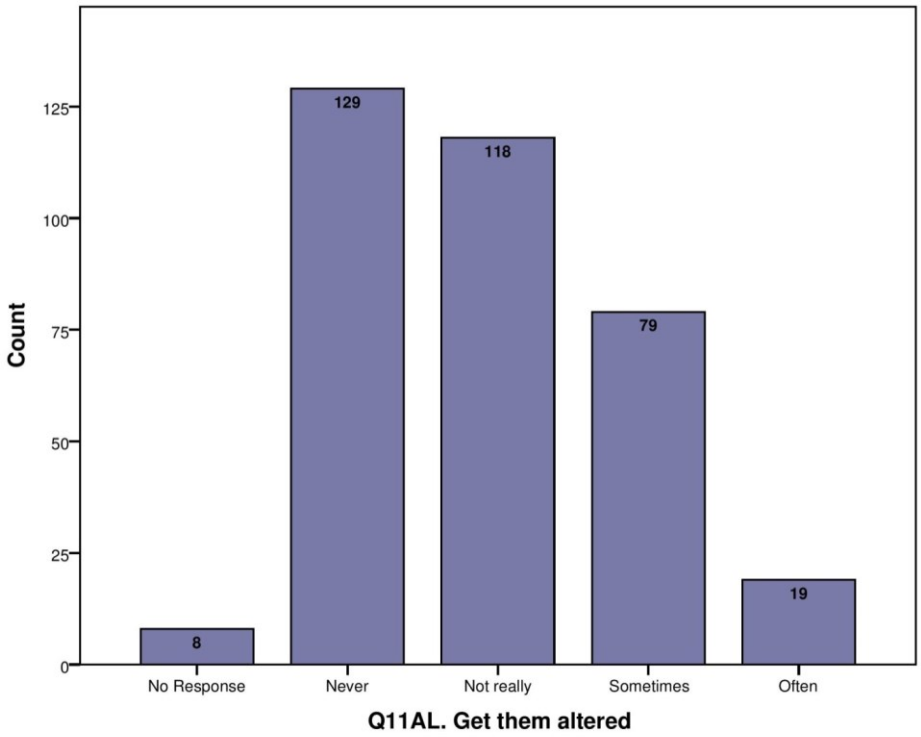


Figure 178. Q11AL. Get them altered

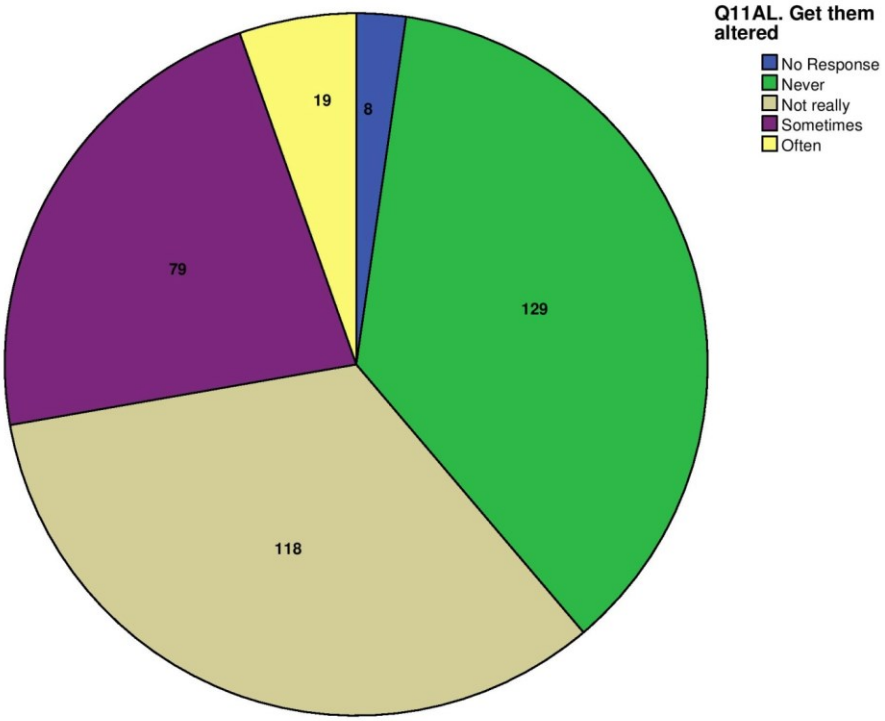


Figure 179. Q11AL. Get them altered

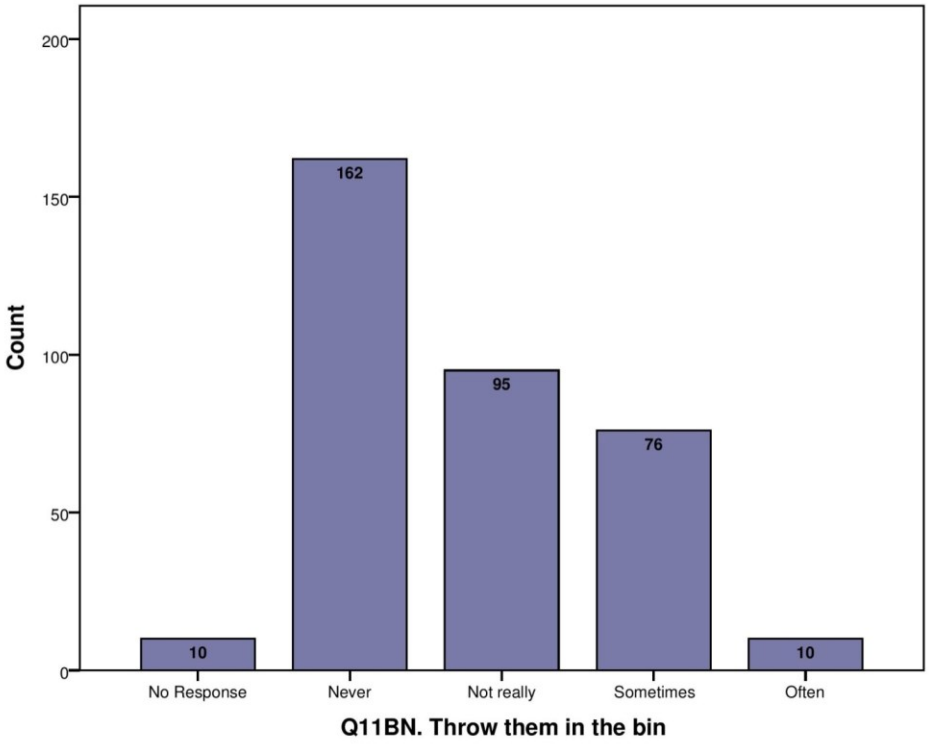


Figure 180. Q11BN. Throw them in the bin

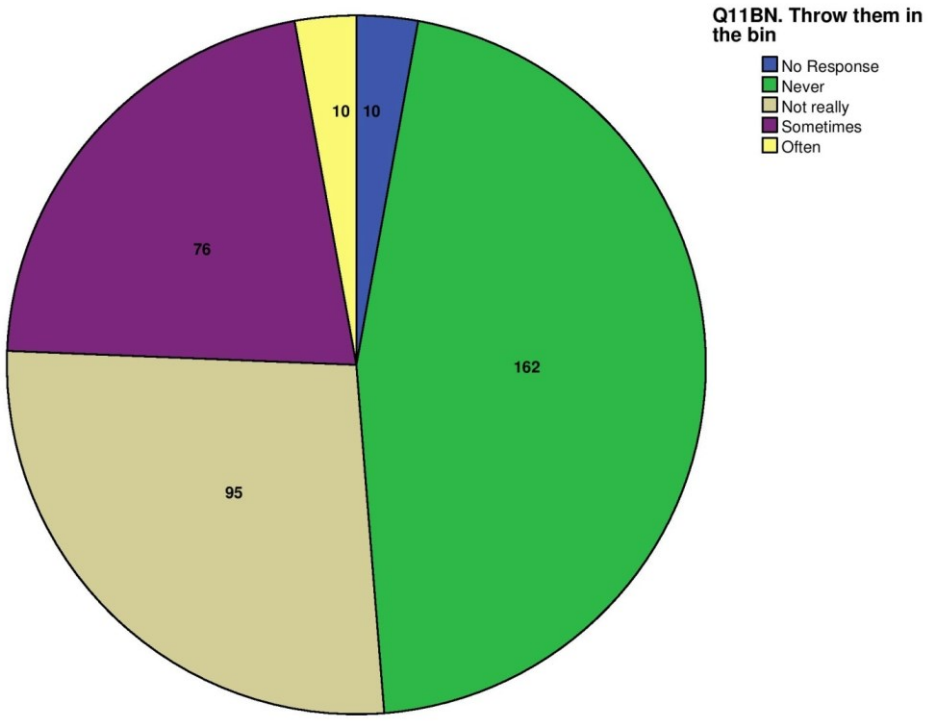


Figure 181. Q11BN. Throw them in the bin

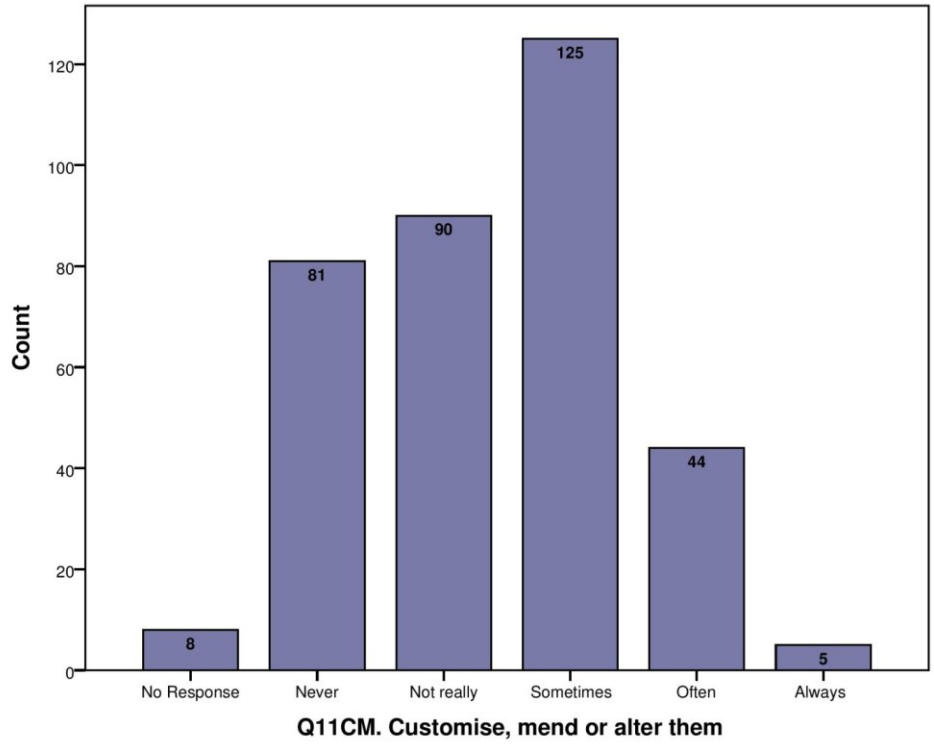


Figure 182. Q11CM. Customise, mend or alter them

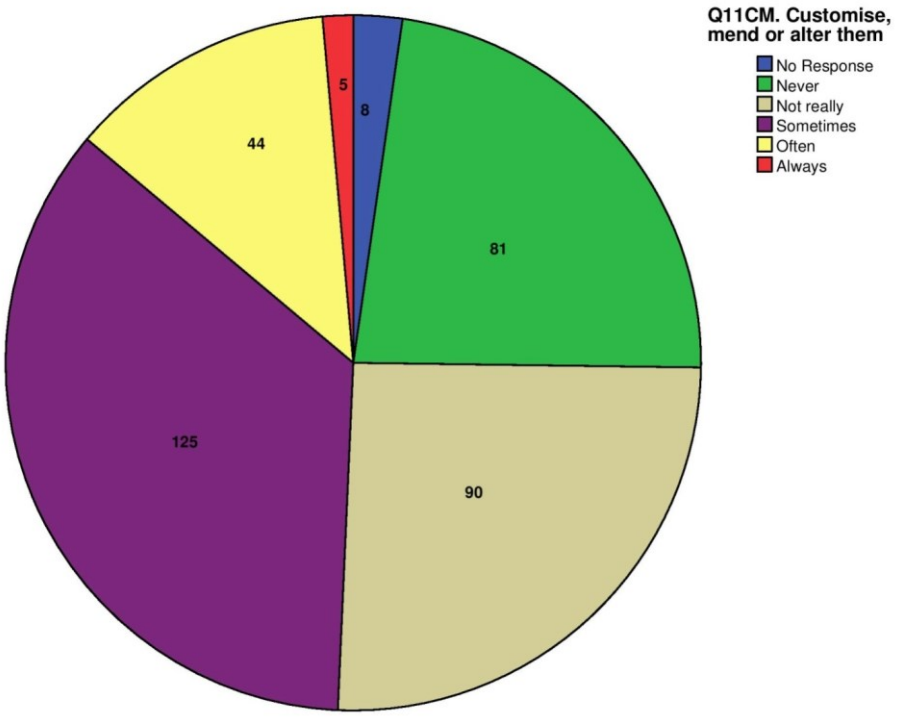


Figure 183. Q11CM. Customise, mend or alter them

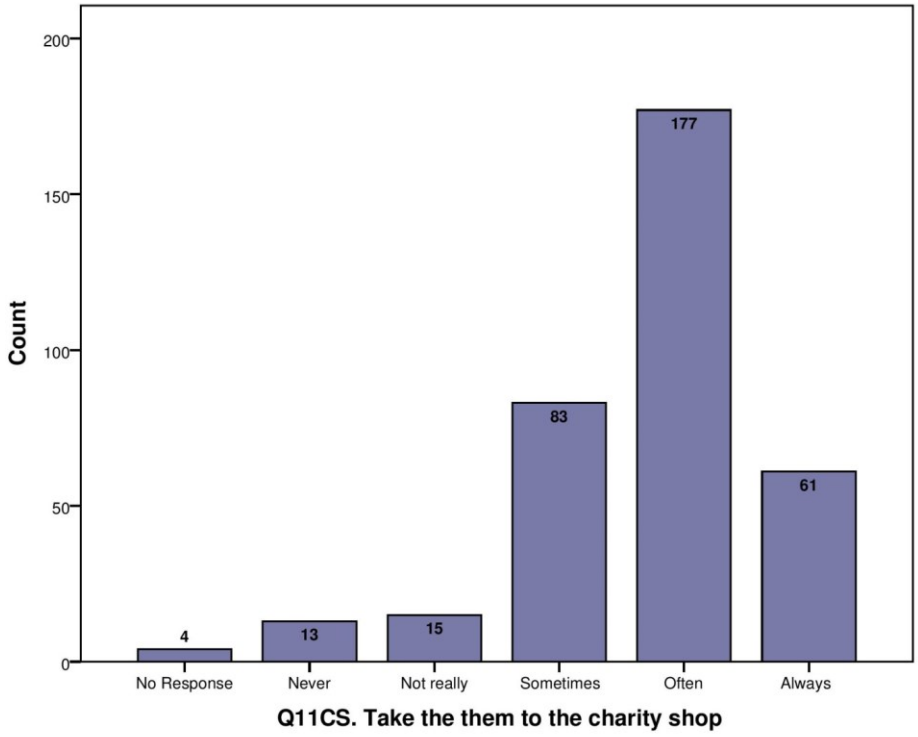


Figure 184. Q11CS. Take them to the charity shop

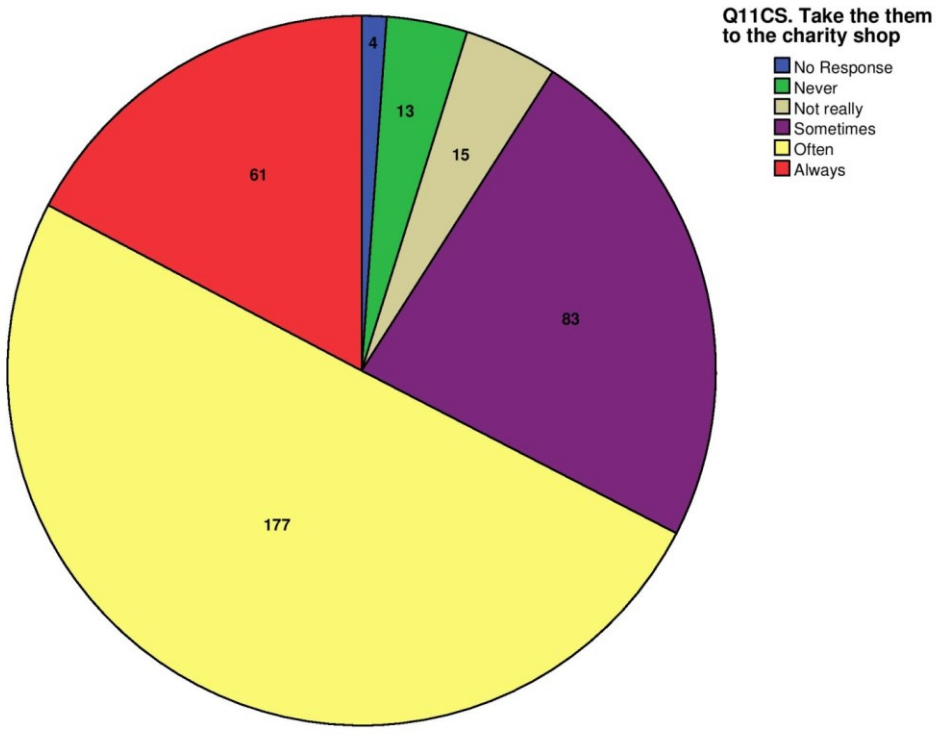


Figure 185. Q11CS. Take them to the charity shop

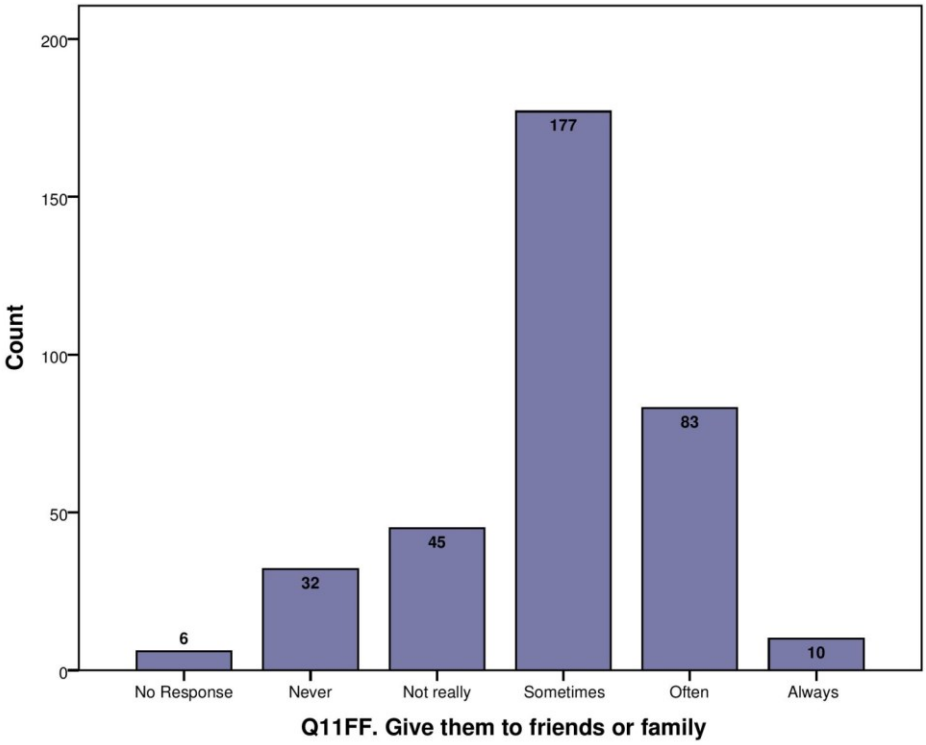


Figure 186. Q11FF. Give them to friends or family

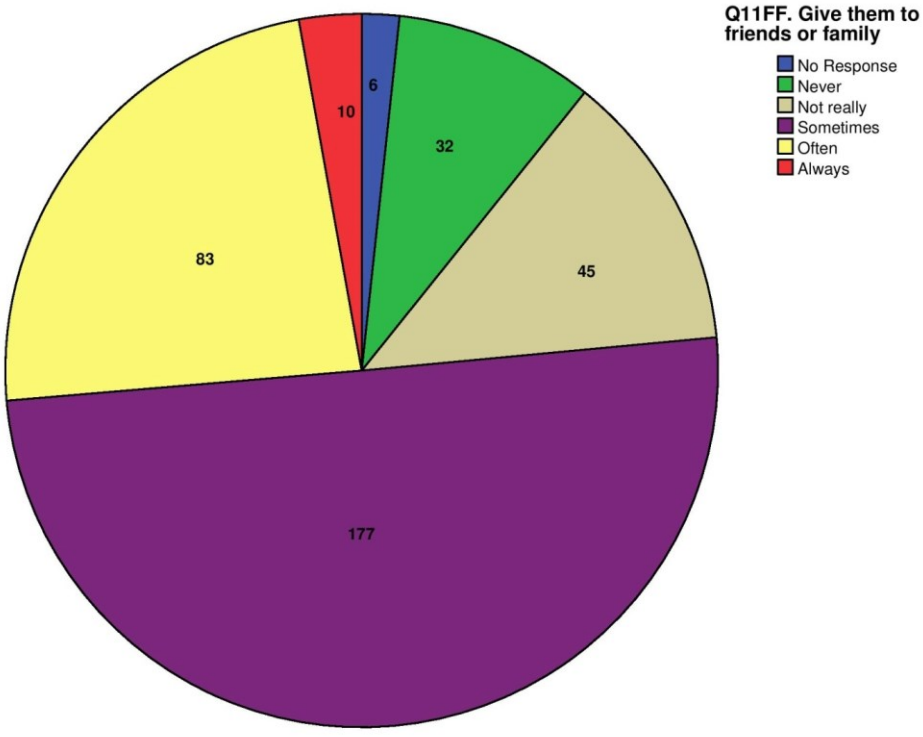


Figure 187. Q11FF. Give them to friends or family

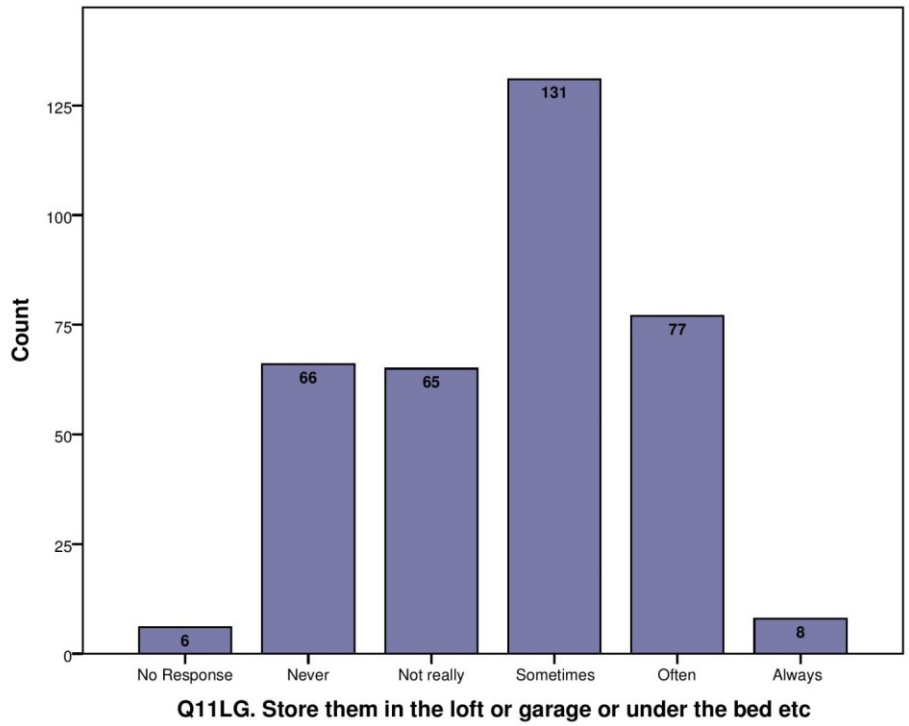


Figure 188. Q11LG. Store them in the loft, garage or under the bed

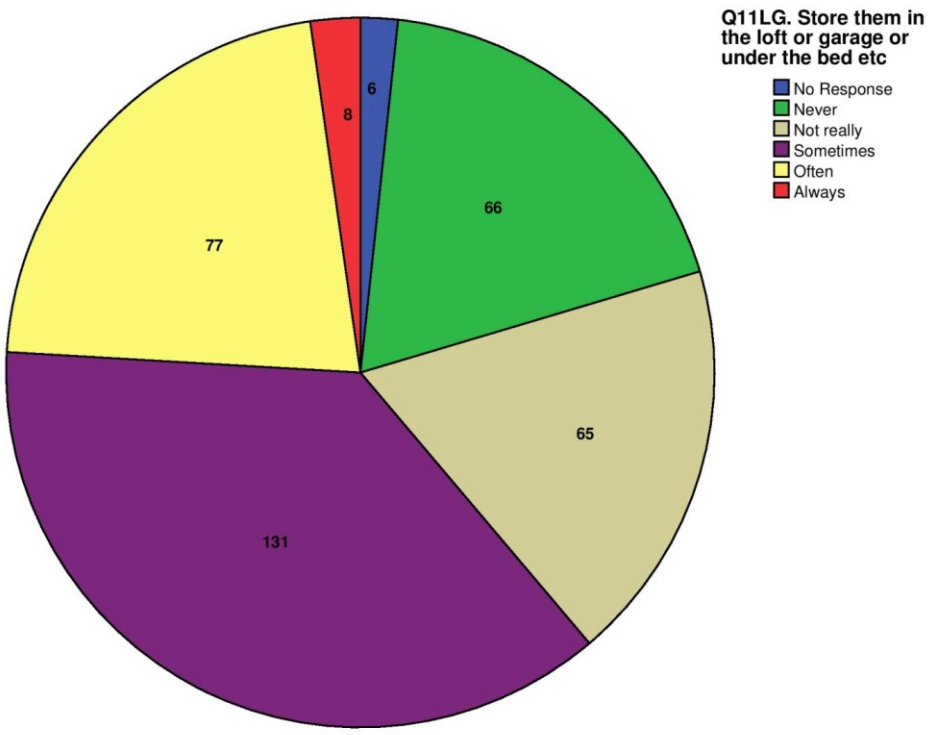


Figure 189. Q11LG. Store them in the loft, garage or under the bed

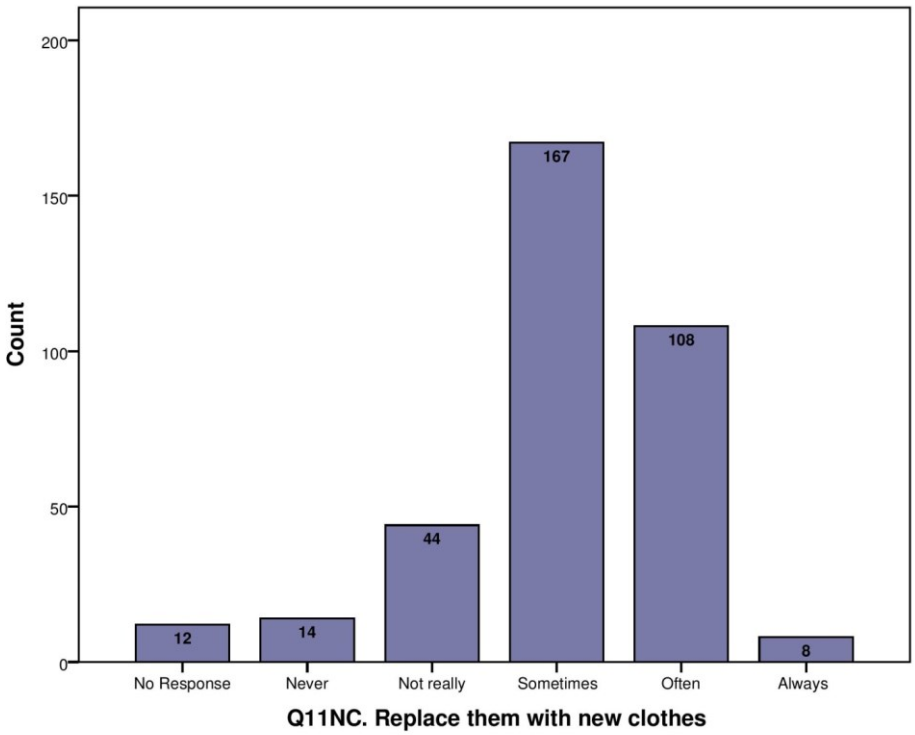


Figure 190. Q11NC. Replace them with new clothes

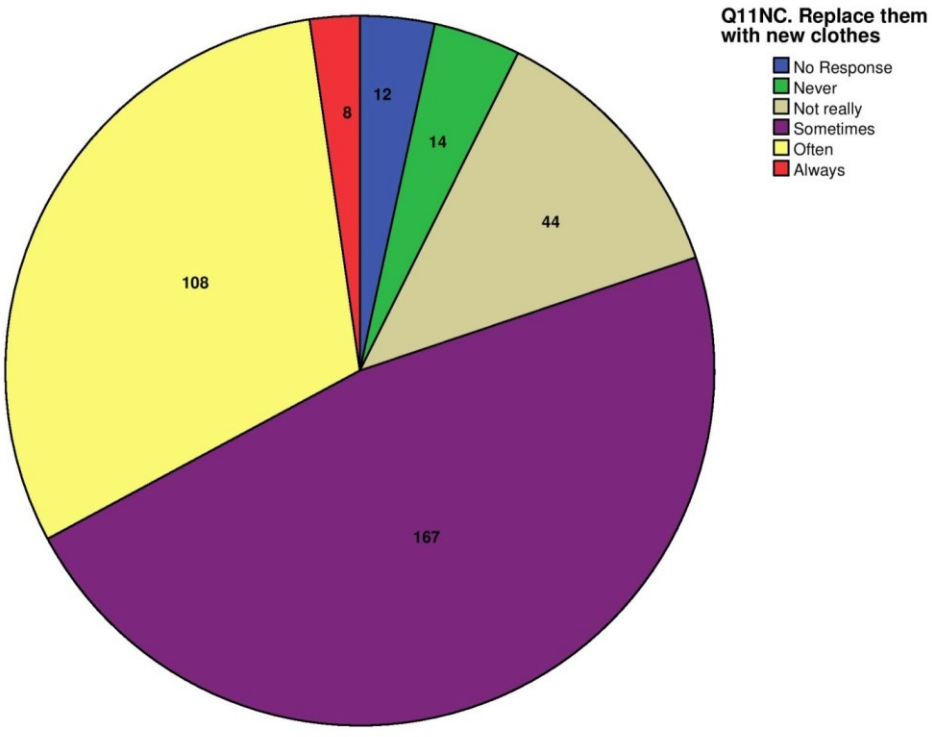


Figure 191. Q11NC. Replace them with new clothes

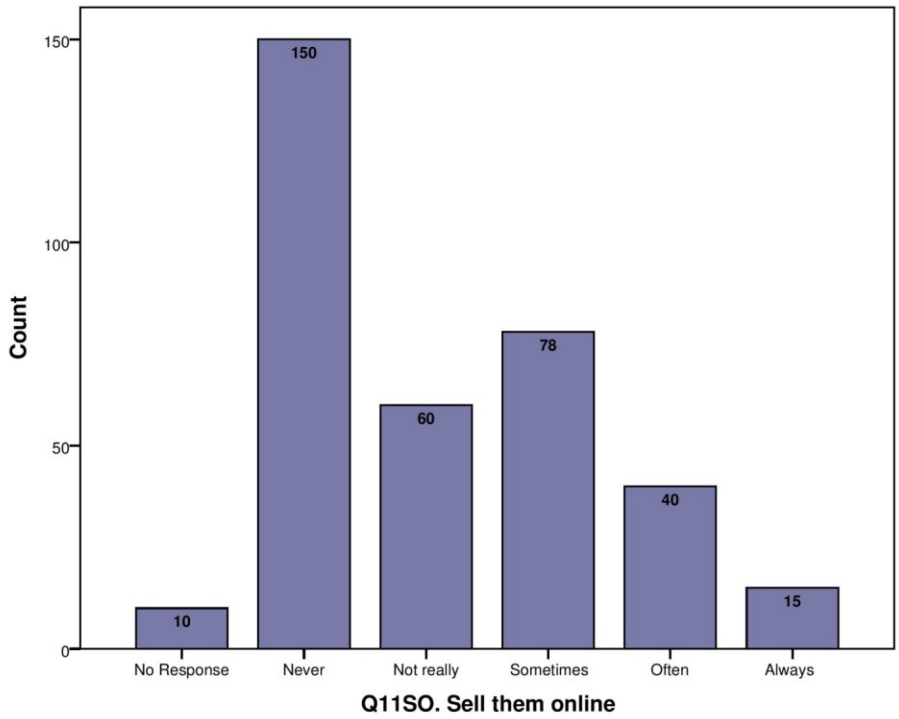


Figure 192. Q11SO. Sell them online

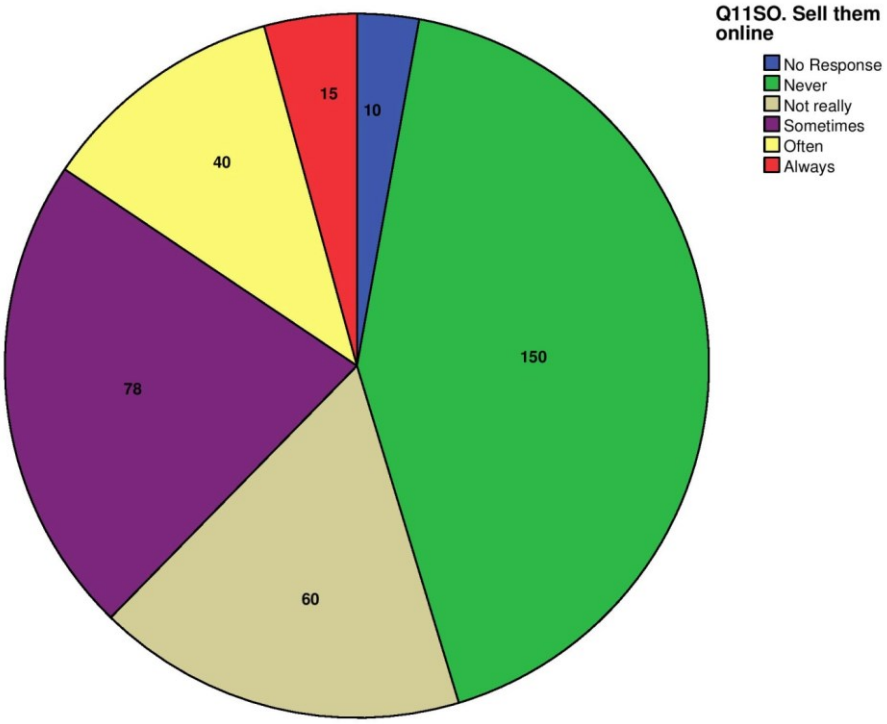


Figure 193. Q11SO. Sell them online

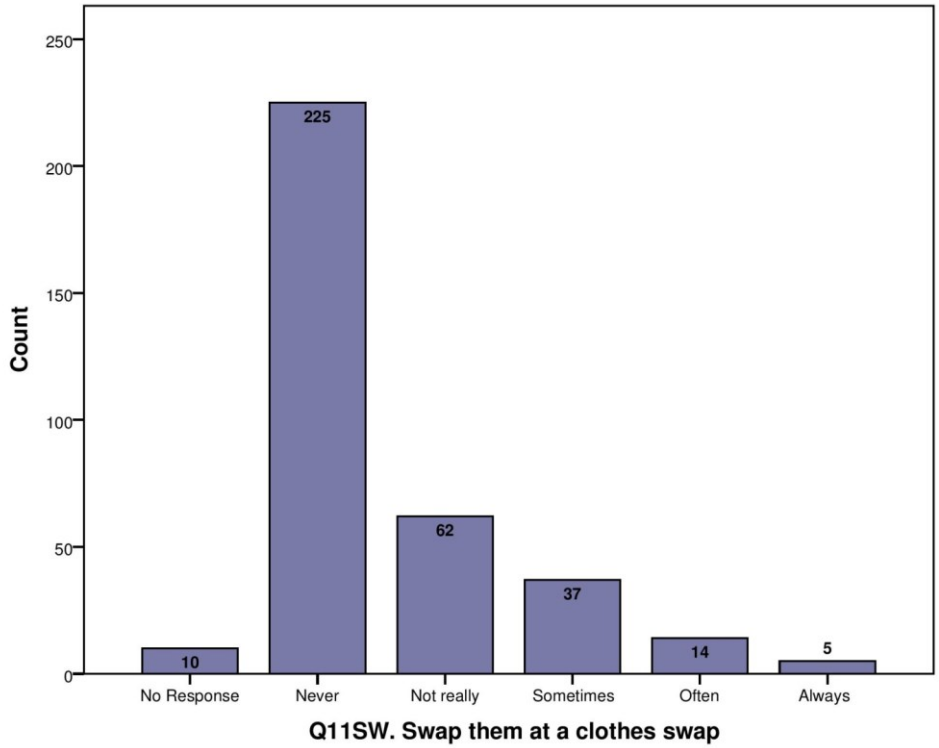


Figure 194. Q11SW. Swap them at a clothes swap

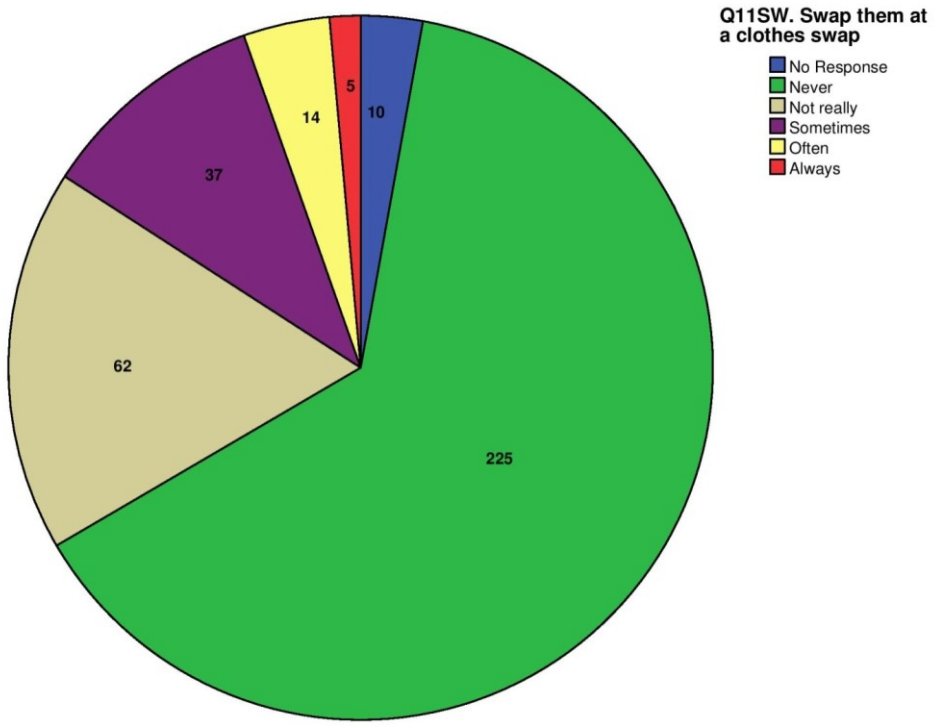


Figure 195. Q11SW. Swap them at a clothes swap

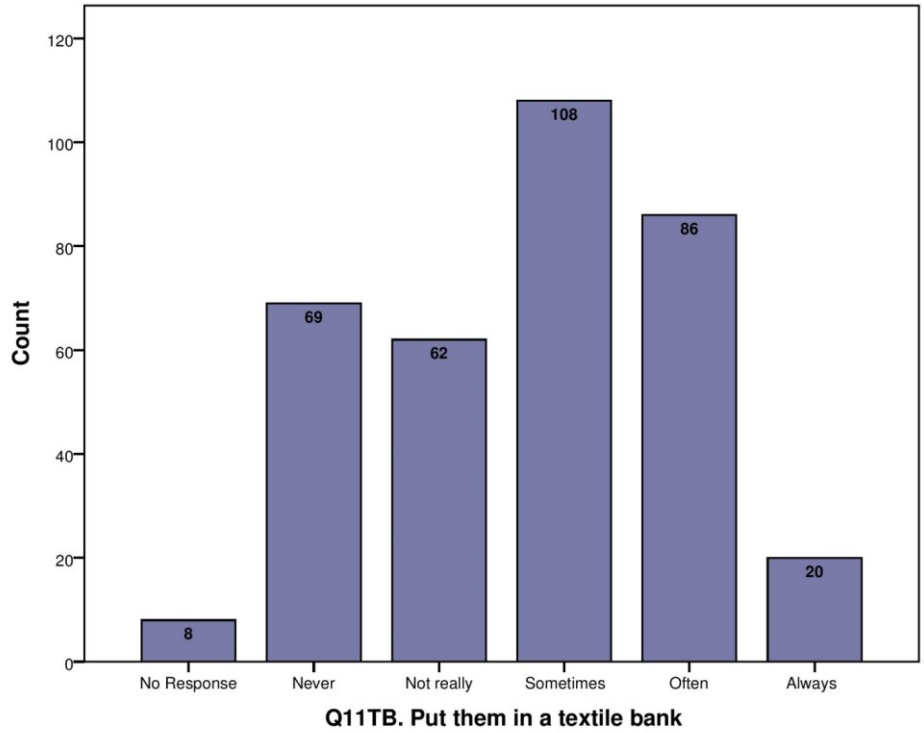


Figure 196. Q11TB. Put them in a textile bank

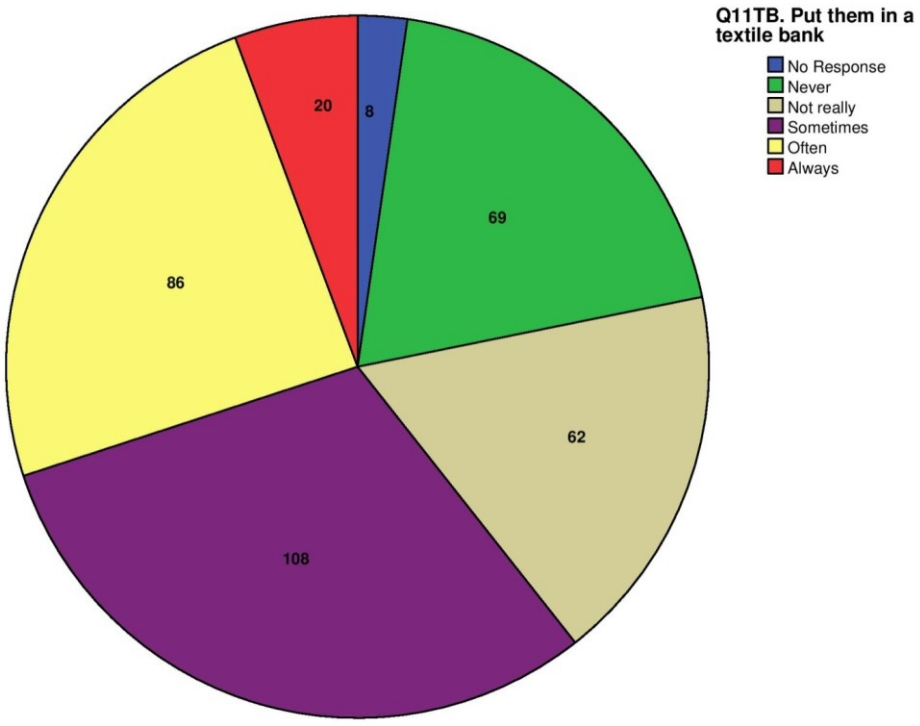


Figure 197. Put them in a textile bank

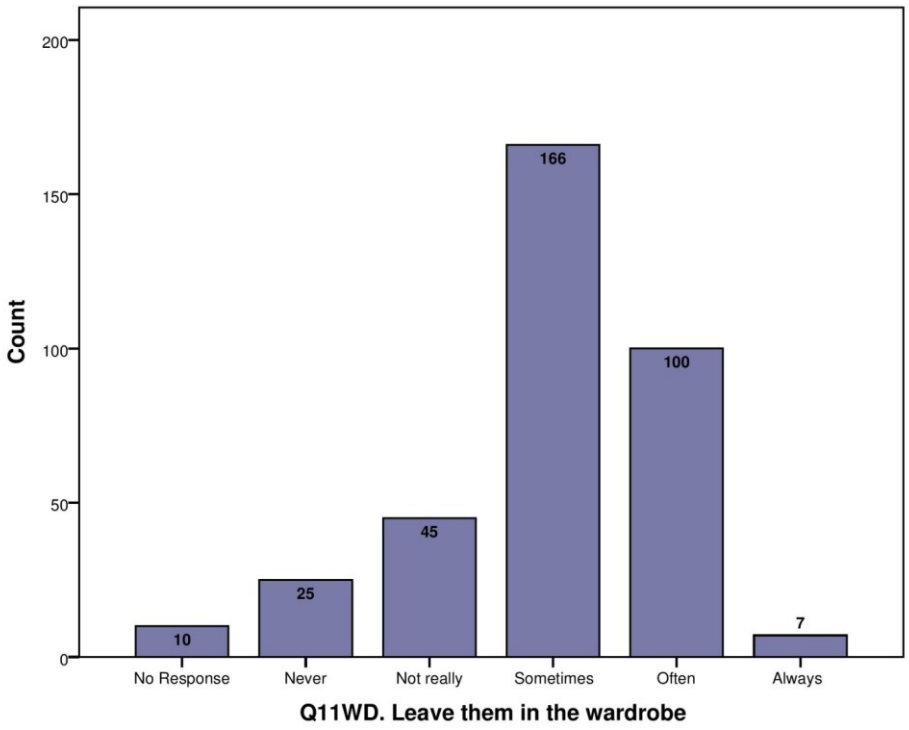


Figure 198. Q11WD. Leave them in the wardrobe

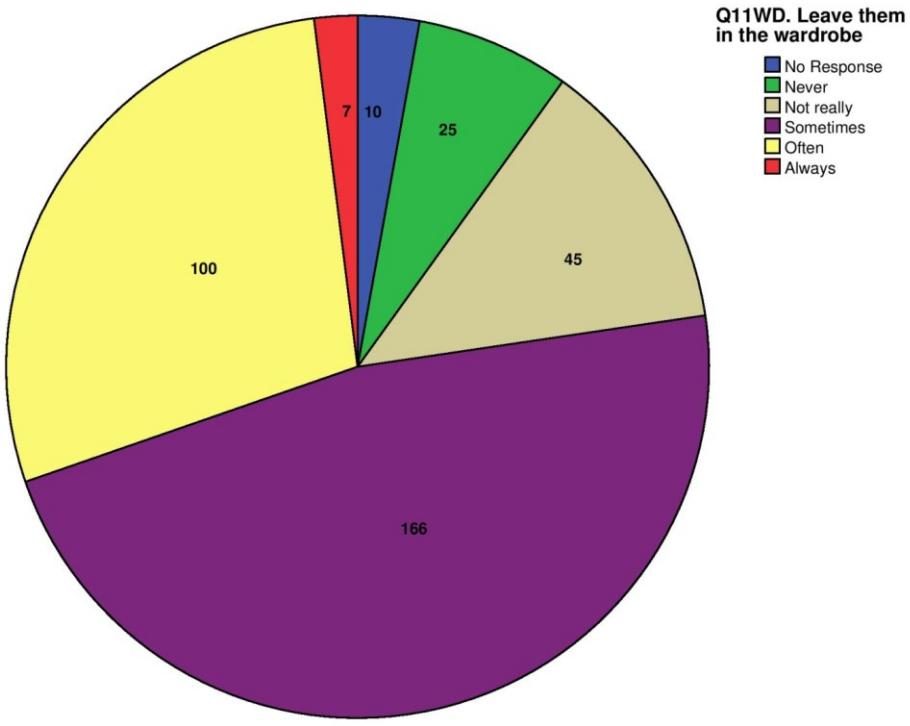


Figure 199. Q11WD. Leave them in the wardrobe

Q12. What do you currently do with...

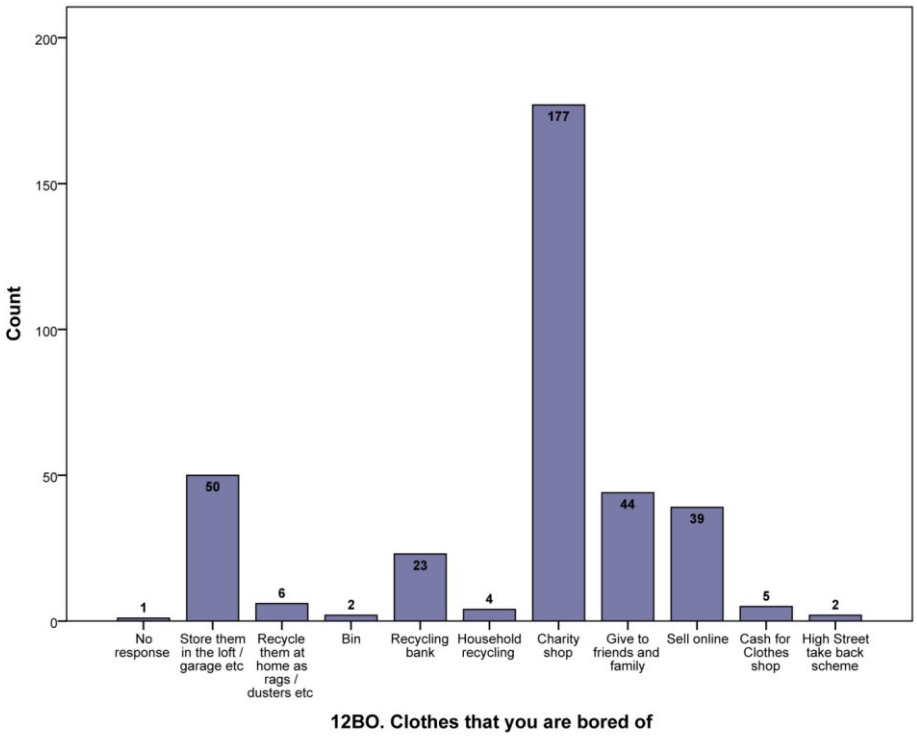


Figure 200. Q12BO. Clothes that you are bored of

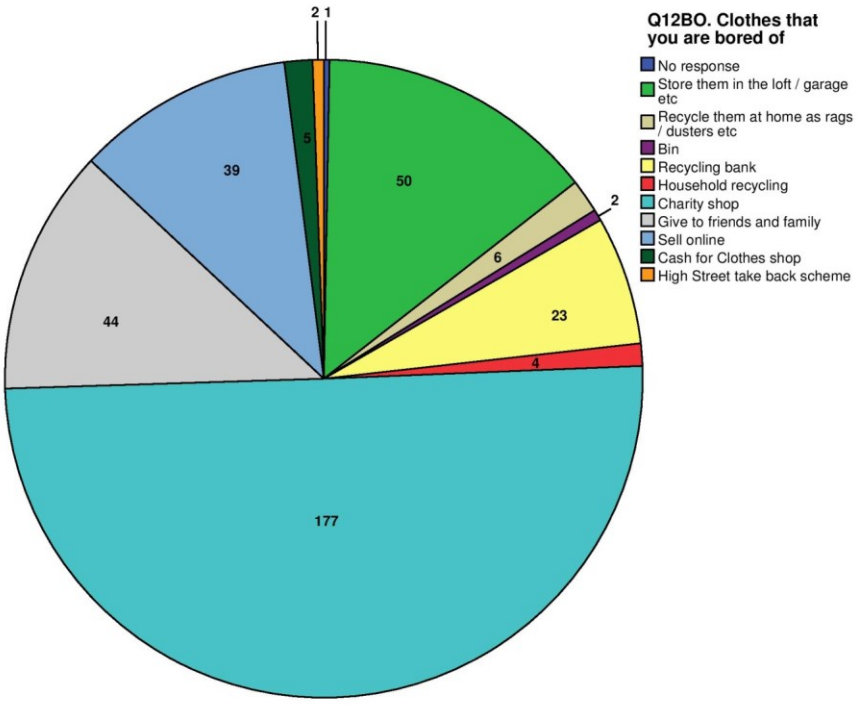


Figure 201. Q12BO. Clothes that you are bored of

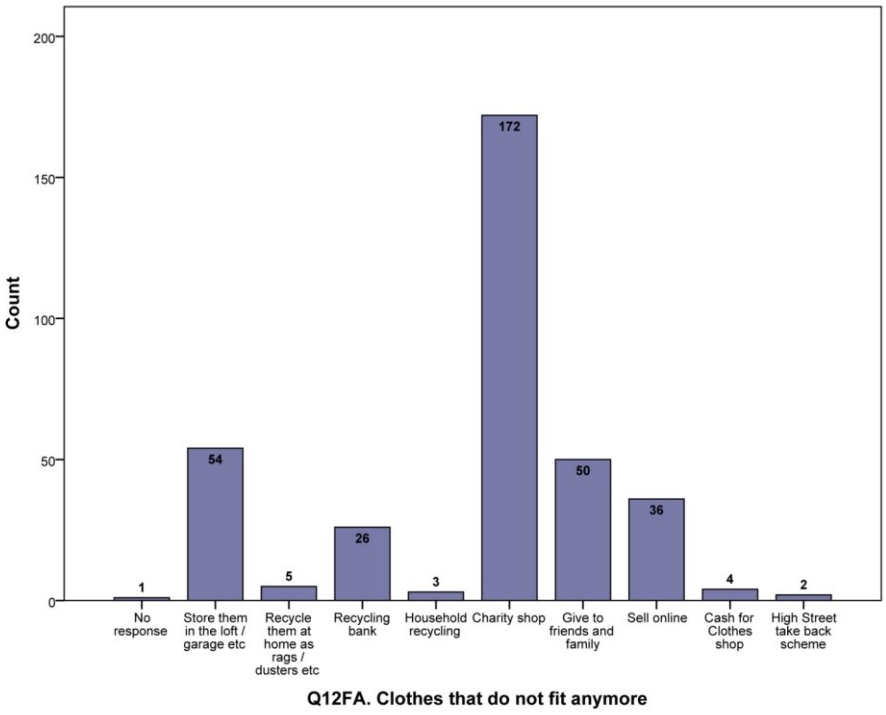


Figure 202. Q12FA. Clothes that do not fit anymore

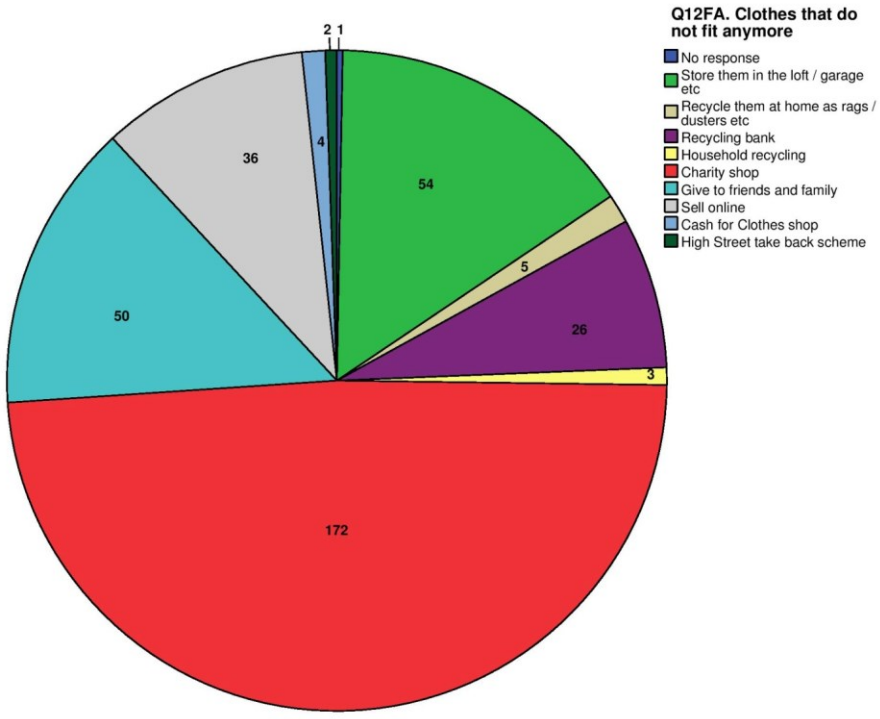


Figure 203. Q12FA. Clothes that do not fit anymore

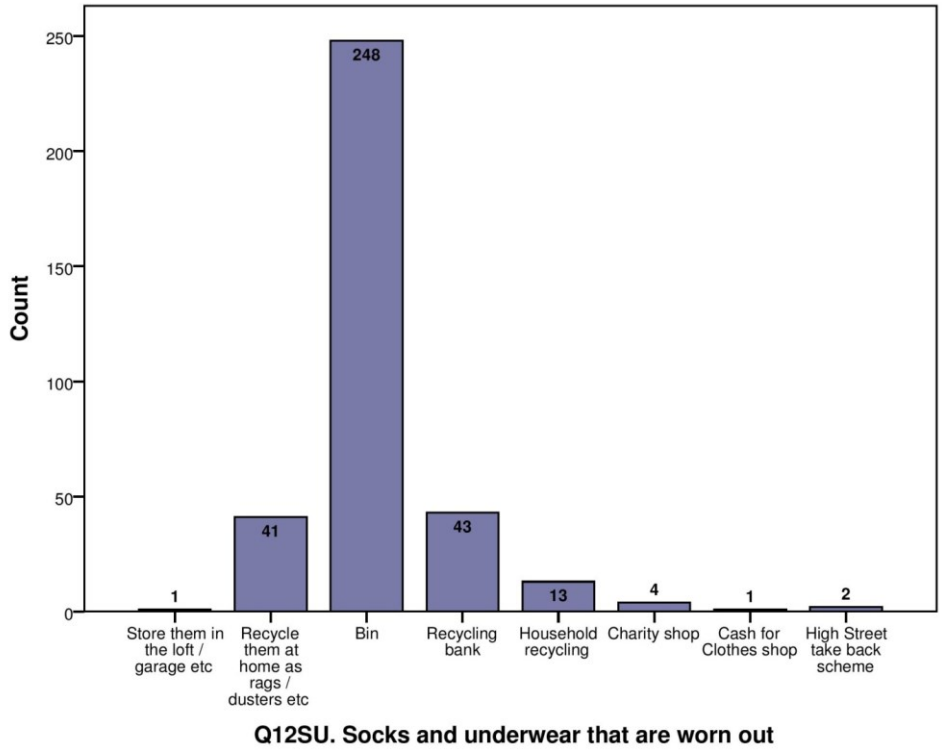


Figure 204. Q12SU. Socks and underwear that are worn out

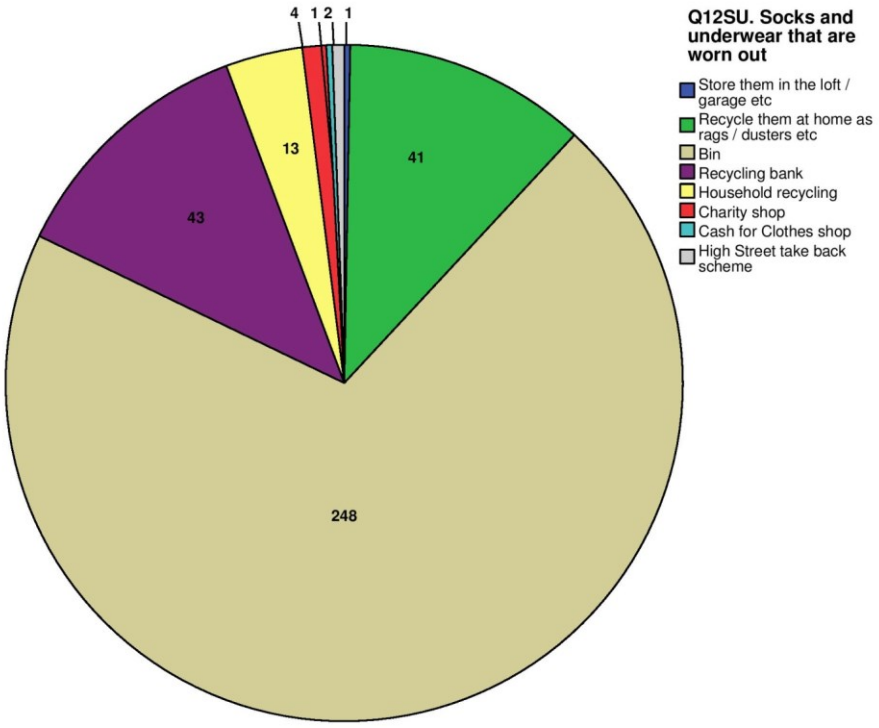


Figure 205. Q12SU. Socks and underwear that are worn out

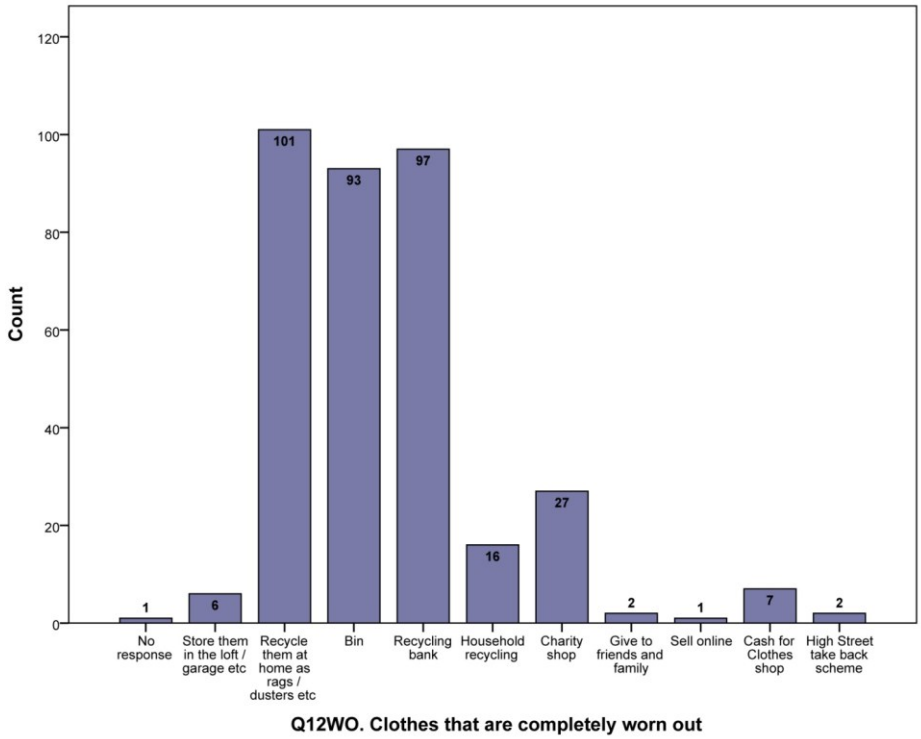


Figure 206. Q12WO. Clothes that are completely worn out

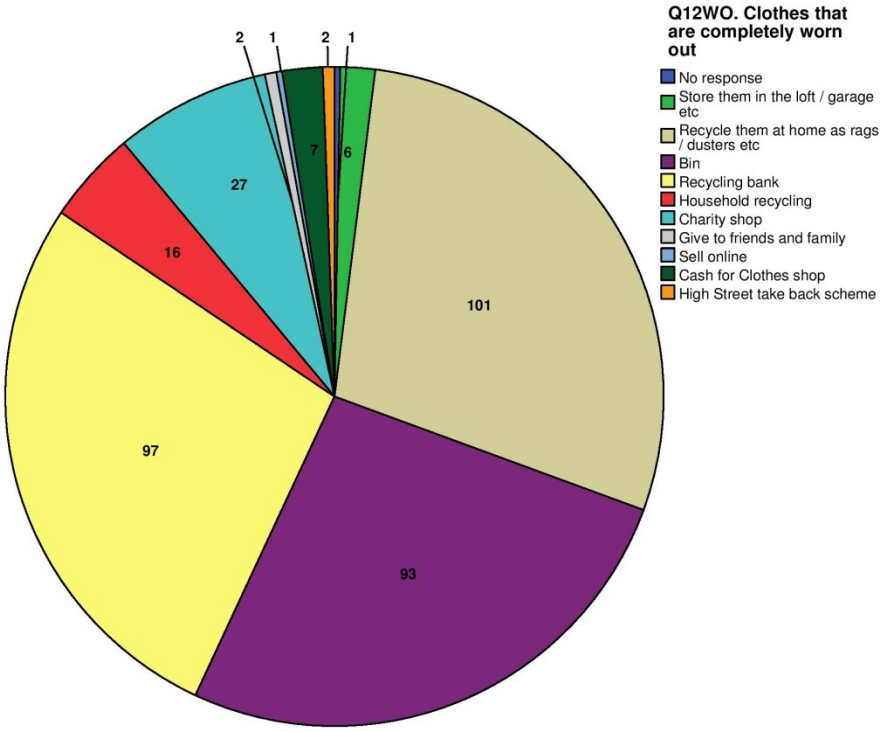


Figure 207. Q12WO. Clothes that are completely worn out

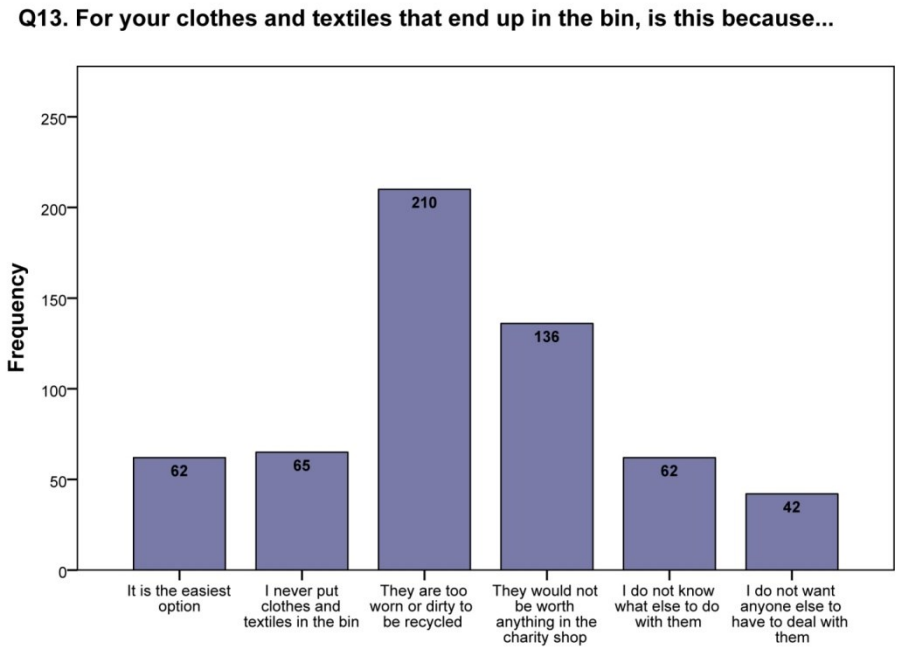


Figure 208. Q13. For your clothes and textiles that end up in the bin, is this because...

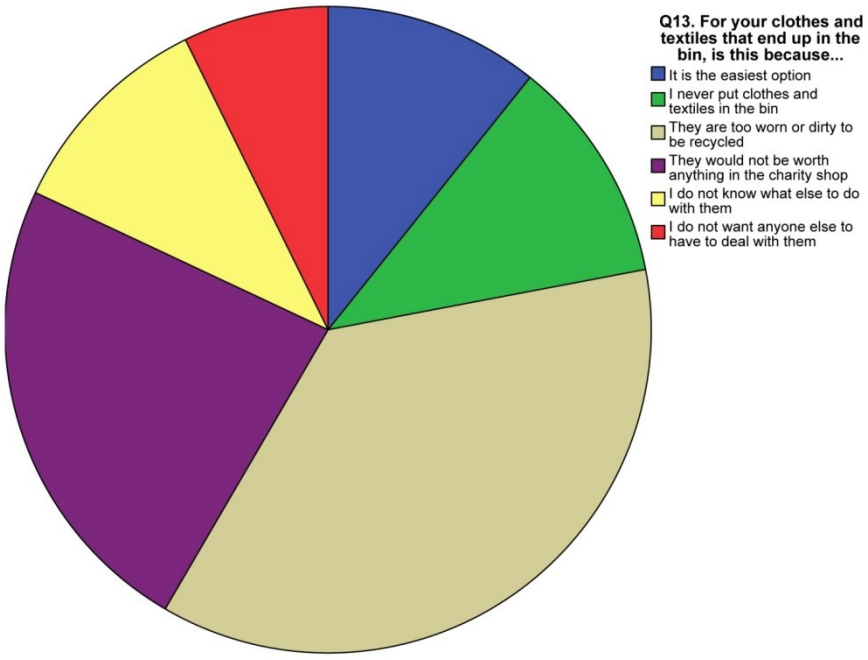


Figure 209. Q13. For your clothes and textiles that end up in the bin, is this because...

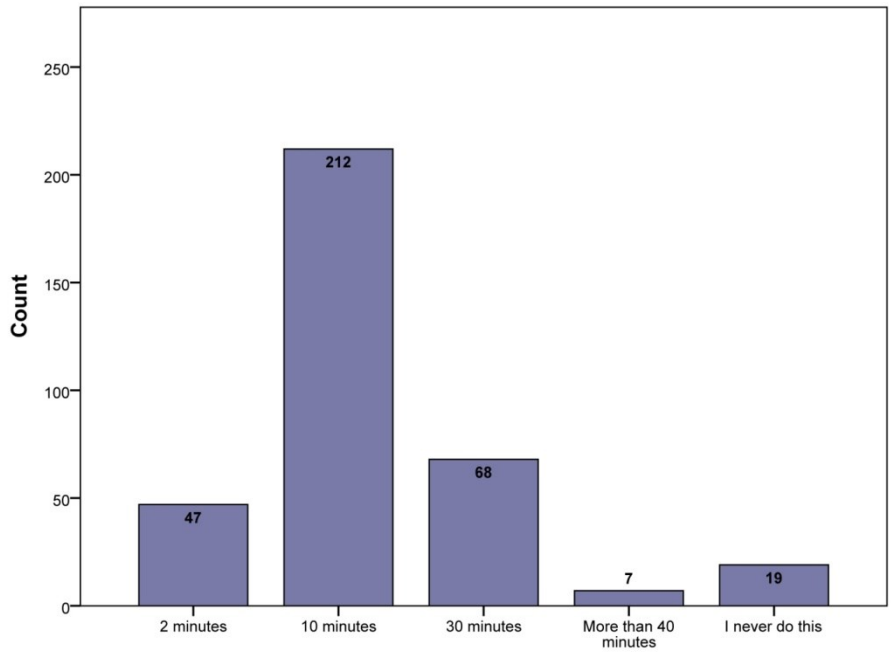


Figure 210. Q14. If you have taken clothes to a charity shop or textile bank, how long did it take you to get there?

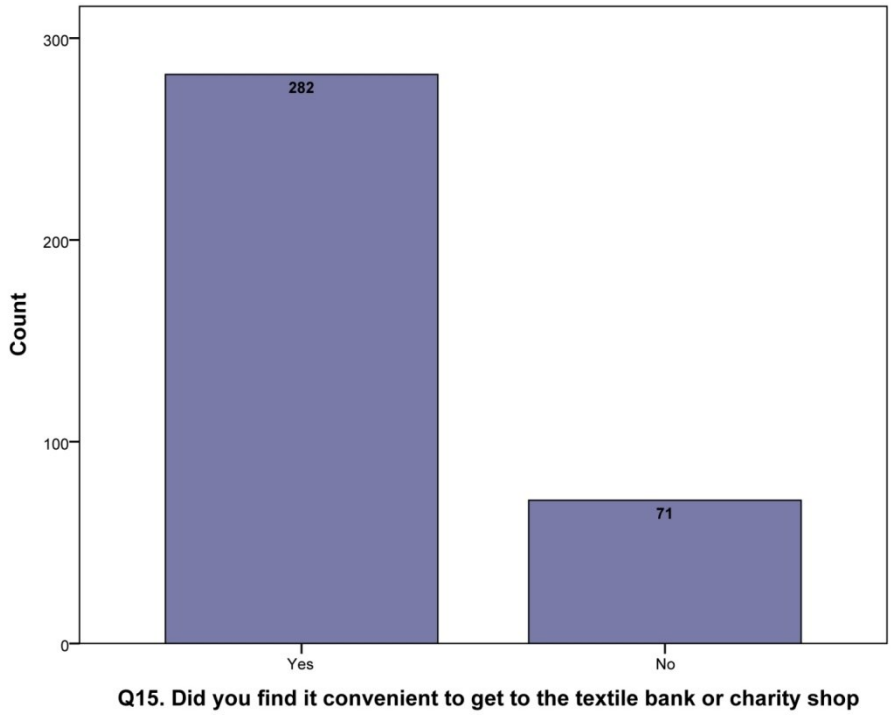


Figure 211. Q15. Did you find it convenient to get to the textile bank or charity shop?

10.5.6 Fashion Influences and Information

10.5.6.1 ANOVA Tests for Personal Style Statements and Demographic Variables

Respondents selected Likert scale responses to indicate their level of agreement with statements made in questions 8, 16 and 17. Data was then analysed using ANOVA tests to search for associations between demographic variables and these personal style statements. Mean scores of each demographic variable category were then compared to find significant differences. Variables with a significance level of $p<0.05$, $p<0.01$ and $p<0.001$ are presented in for each demographic category of significance, with post hoc analysis presented to reveal which groups within each demographic variable showed significant differences at the $p<0.05$, $p<0.01$ and $p<0.001$ levels.

ANOVA Tests for employment status and relationship status relating to personal style statements did not reveal any results of statistical significance, and post hoc tests were not performed for these two demographic variables as at least one group in each variable had fewer than two cases.

Table 106. ANOVA Test for Personal Style Statements and Age

Variables		Mean Scores of Age Groups						df	F Value	Sig.
		18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 +			
Q8SL	I shop for leisure	3.03	2.68	2.11	2.49	2.29	2.56	5	6.1	0.000***
Q8BS	I enjoy browsing in shops	3.59	3.12	2.86	3.10	3.00	3.22	5	3.6	0.004**
Q8LT	I like to keep up with the latest trends	2.57	2.13	2.14	1.86	1.87	2.33	5	4.2	0.001***
Q8FS	I like to fit in with the style of my friends	1.91	1.98	1.60	1.62	1.55	1.89	5	3.9	0.002**
Q8MW	...style ideas from glossy fashion magazines and websites	2.23	2.08	1.72	1.98	1.84	2.11	5	2.3	0.048*
Q8AD	I find advertising a bit much it is everywhere	3.36	3.75	3.96	3.81	3.73	4.11	5	2.4	0.038*
Q16FU	I like to have fun with fashion and clothing	3.54	3.36	3.09	3.24	2.93	2.89	5	2.7	0.022*
Q16ST	Being stylish and on trend is important to me	2.90	2.35	2.32	2.31	2.20	2.11	5	3.9	0.002**
Q17FA	Fashionable	3.30	2.71	2.65	2.69	2.63	2.78	5	4.9	0.000***
Q17ST	Stylish	3.43	2.96	3.02	3.10	3.09	2.78	5	2.5	0.028*
Q17IM	Impressionable	2.86	2.60	2.26	2.19	2.13	2.44	5	6.6	0.000***
Q17TR	On trend	2.96	2.48	2.44	2.29	2.16	2.11	5	6.1	0.000***
*p<0.05, **p<0.01, ***p<0.001										

Table 107. ANOVA Post Hoc Analysis for Personal Style Statements and Age

Post Hoc Analysis					
Variables		**Age Groups**		**Mean Difference**	**Sig.**
Q8SL	I shop for leisure	18 to 24	35 to 44	0.923	0.000***
Q8SL	I shop for leisure	18 to 24	55 to 64	0.738	0.010**
Q8SL	I shop for leisure	25 to 34	35 to 44	0.578	0.004**
Q8BS	I enjoy browsing in shops	18 to 24	25 to 34	0.467	0.025*
Q8BS	I enjoy browsing in shops	18 to 24	35 to 44	0.726	0.001***
Q8LT	I like to keep up with the latest trends	18 to 24	25 to 34	0.438	0.019*
Q8LT	I like to keep up with the latest trends	18 to 24	45 to 54	0.714	0.002**
Q8LT	I like to keep up with the latest trends	18 to 24	55 to 64	0.700	0.008**
Q8FS	I like to fit in with the style of my friends	25 to 34	35 to 44	0.382	0.017*
Q8FS	I like to fit in with the style of my friends	25 to 34	55 to 64	0.430	0.049*
Q8MW	...style ideas from glossy magazines...	18 to 24	35 to 44	0.509	0.030*
Q8AD	I find advertising a bit much...	18 to 24	35 to 44	0.608	0.027*
Q16FU	... fun with fashion and clothing	Not statistically significant			
Q16ST	...stylish and on trend is important...	18 to 24	25 to 34	0.548	0.003**
Q16ST	...stylish and on trend is important...	18 to 24	35 to 44	0.584	0.017*
Q16ST	...stylish and on trend is important...	18 to 24	45 to 54	0.590	0.036*
Q16ST	...stylish and on trend is important...	18 to 24	55 to 64	0.700	0.021*
Q17FA	Fashionable	18 to 24	25 to 34	0.594	0.000***
Q17FA	Fashionable	18 to 24	35 to 44	0.651	0.002**
Q17FA	Fashionable	18 to 24	45 to 54	0.610	0.013*
Q17FA	Fashionable	18 to 24	55 to 64	0.675	0.011*
Q17ST	Stylish	18 to 24	25 to 34	0.471	0.011*
Q17IM	Impressionable	18 to 24	35 to 44	0.594	0.001***
Q17IM	Impressionable	18 to 24	45 to 54	0.667	0.001***
Q17IM	Impressionable	18 to 24	55 to 64	0.732	0.000***
Q17IM	Impressionable	25 to 34	55 to 64	0.476	0.036*
Q17TR	On trend	18 to 24	25 to 34	0.482	0.002**
Q17TR	On trend	18 to 24	35 to 44	0.519	0.009**
Q17TR	On trend	18 to 24	45 to 54	0.671	0.001***
Q17TR	On trend	18 to 24	55 to 64	0.801	0.000***

Table 108. ANOVA Test for Personal Style Statements and Education Level

Variables		Mean Scores of Education Level Groups				df	F Value	Sig.
		Secondary school	Sixth form college	University graduate	University post-graduate			
Q16BB	... blend in to the background	2.88	2.65	2.28	2.42	3	3.62	0.013*
Q16FO	... fit in with others around me	1.88	2.27	1.91	2.11	3	3.062	0.028*
Q16BL	...smart and business like...	2.69	2.64	2.29	2.68	3	4.019	0.008**
Q16CR	... casual and relaxed ...	3.69	3.95	3.71	3.58	3	3.037	0.029*
Q17EC	Eco conscious	2.82	2.78	2.98	3.28	3	4.373	0.005**
Q17RS	Responsible	4.00	3.58	3.51	3.84	3	5.229	0.002**
Q17KN	Knowledgeable	3.29	3.44	3.41	3.72	3	4.156	0.007**
*p<0.05, **p<0.01, ***p<0.001								

Table 109. ANOVA Post Hoc Analysis for Personal Style Statements and Education Level

Post Hoc analysis					
Variables		**Education Level Groups**		**Mean Difference**	**Sig.**
Q16BB	I prefer to blend in to the background	Not statistically significant			
Q16FO	I just want to fit in with others around me	Sixth form college	University graduate	0.361	0.034*
Q16BL	I like to dress in a smart and business like way	University graduate	University post-graduate	-0.388	0.006**
Q16CR	I like to dress in a casual and relaxed way	Sixth form college	University post-graduate	0.364	0.015*
Q17EC	Eco conscious	Sixth form college	University post-graduate	-0.496	0.010**
Q17RS	Responsible	University graduate	University post-graduate	-0.331	0.003**
Q17KN	Knowledgeable	University graduate	University post-graduate	-0.31	0.012*

Table 110. ANOVA Test for Personal Style Statements and Household Income

Variables		Mean Scores of Household Income Groups							df	F Value	Sig.
		Under £10,000	£10,000 to £20,000	£20,000 to £30,000	£30,000 to £50,000	£50,000 to £70,000	£70,000 to £100,000	£100,000+ p.a.			
Q8IS	... impulsive shopper	2.22	3.06	2.81	2.78	2.98	3.00	2.69	6	4.448	0.000***
Q8AD	...advertising a bit much	3.91	3.99	3.43	3.83	3.38	3.69	3.69	6	2.479	0.023*
Q16BL	…business like…	2.47	2.16	2.69	2.42	2.91	2.81	2.62	6	3.779	0.001***
Q16AT	…alternative	3.34	3.46	3.17	3.18	2.89	2.92	2.69	6	2.677	0.015*
Q17EC	Eco conscious	3.35	3.23	3.07	3.03	2.96	2.58	3.08	6	2.169	0.046*
Q17CT	Creative	3.86	3.81	3.60	3.69	3.36	3.08	3.54	6	2.451	0.025*
*p<0.05, **p<0.01, ***p<0.001											

Table 111. ANOVA Post Hoc Analysis for Personal Style Statements and Household Income

Post Hoc analysis					
Variables		**Household Income Groups**		**Mean Difference**	**Sig.**
Q8IS	I am an impulsive shopper	Under £10,000 p.a.	£10,000 to £20,000 p.a.	-0.840	0.000***
Q8IS	I am an impulsive shopper	Under £10,000 p.a.	£20,000 to £30,000 p.a.	-0.592	0.026*
Q8IS	I am an impulsive shopper	Under £10,000 p.a.	£30,000 to £50,000 p.a.	-0.564	0.021*
Q8IS	I am an impulsive shopper	Under £10,000 p.a.	£50,000 to £70,000 p.a.	-0.761	0.002**
Q8IS	I am an impulsive shopper	Under £10,000 p.a.	£70,000 to £100,000 p.a.	-0.782	0.016*
Q8AD	I find advertising a bit much it is everywhere	Not statistically significant			
Q16BL	I like to dress in a smart and business like way	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	-0.530	0.035*
Q16BL	I like to dress in a smart and business like way	£10,000 to £20,000 p.a.	£50,000 to £70,000 p.a.	-0.755	0.001**
Q16AT	I like to wear things that are a bit alternative	£10,000 to £20,000 p.a.	£50,000 to £70,000 p.a.	0.572	0.039*
Q17EC	Eco conscious	£10,000 to £20,000 p.a.	£70,000 to £100,000 p.a.	0.774	0.022*
Q17CT	Creative	Under £10,000 p.a.	£70,000 to £100,000 p.a.	0.783	0.037*

Table 112. ANOVA Test for Personal Style Statements and Employment Status

Variables		Mean Scores of Employment Status Groups									df	F Value	Sig.
		Employed full-time	Employed part-time	Looking for work	NOT looking for work	Self employed	Retired	Not able to work	In education	Other			
Q8BS	…browsing…	2.97	2.61	3.15	2.33	2.40	2.71	2.00	2.78	2.29	8	2.731	0.006**
Q16FU	…fun…	3.19	3.23	3.62	2.50	3.54	3.00	3.00	3.28	3.86	8	1.984	0.048*
Q16ST	…stylish and on trend…	2.51	2.26	2.62	1.50	2.17	2.00	2.00	2.69	2.57	8	2.113	0.034*
Q16AT	… alternative	2.97	3.28	3.50	2.67	3.53	3.29	4.00	3.16	3.71	8	2.607	0.009**
Q17EC	Eco conscious	2.86	2.98	2.92	3.17	3.63	2.88	2.00	3.06	3.86	8	4.136	0.000***
Q17CT	Creative	3.35	3.70	4.00	3.00	4.20	3.25	3.00	3.64	4.36	8	4.618	0.000***
Q17CL	Classic	2.91	2.48	2.85	3.17	3.02	2.88	2.00	3.16	2.50	8	2.465	0.013*
*p<0.05, **p<0.01, ***p<0.001													
Post hoc tests were not performed for the employment status because at least one group in each variable had fewer than two cases.													

Table 113. ANOVA Test for Personal Style Statements and Relationship Status

Variables		Mean Scores of Relationship Status Groups								df	F Value	Sig.
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other			
Q8SL	I shop for leisure	2.540	5	1.790	2.25	2.27	2.68	2.8	2.27	7	3.498	0.001
Q16FU	…fun…	3.080	4	2.860	2.75	3.28	3.4	3.42	3.73	7	2.067	0.047
Q16BL	… business like…	2.810	4	2.430	2.75	2.53	2.26	2.46	2.73	7	2.601	0.013
Q17FA	Fashionable	2.650	3	2.790	2.6	2.77	2.63	3.04	3.36	7	2.270	0.029
Q17ST	Stylish	3.100	4	2.860	2.4	2.87	2.9	3.26	3.64	7	2.300	0.027
Q17IM	Impressionable	2.380	2	2.430	2.2	2.57	2.26	2.81	2.36	7	3.714	0.001
Q17TR	On trend	2.340	3	2.430	2	2.53	2.37	2.72	3	7	2.579	0.013
Post hoc tests were not performed for relationship status because at least one group in each variable had fewer than two cases.												

Table 114. Sources of Information

Q18. Where do you find information on clothes, fashion and shopping?	**N**	**%**
Retailers, brands or fashion websites	157	44.5
Shopping with friends and family	156	44.2
Social media and blogs	141	39.9
Magazines and newspapers	134	38
Talking with friends and family	125	35.4
Email newsletters from fashion brands	86	24.4
TV programmes and adverts	54	15.3
Other	38	10.8
Q19. Where do you find information on what to do with your old clothes?	**N**	**%**
From what I leant at home growing up	212	60.1
Talking with friends and family	132	37.4
Flyers through the door	71	20.1
Websites	53	15
Clothes shops	48	13.6
From what I learnt at school / college / university	48	13.6
From my workplace	39	11
Other	35	9.9
Magazines and newspapers	26	7.4
TV programmes and adverts	15	4.2

10.5.6.2 Crosstabulations for Demographic Variables and Sources of Information

Crosstabulations were also performed to analyse the data for further patterns of association. Each source of fashion or clothing information was crosstabulated against demographic variables in order to create contingency tables, showing the frequency of occurrence at the intersection between the two variable categories. A chi-square statistic plus degrees of freedom and significance level is also presented to highlight relationships of statistical significance.

Key:	N = Number of fashion influence types within demographic category F = % of fashion influence types out of all fashion influence types (row variable) D = % of fashion influence types within demographic category (column variable) X^2 = chi-square statistic df = degrees of freedom Sig. = Significance level * p<0.05, **p<0.01, ***p<0.001

Table 115. Age and Sources of Information 1

Where do you find information on clothes, fashion and shopping?		Age								
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +	χ^2	df	Sig.
Magazines and newspapers	N	25	50	20	21	17	1	9.4	5	0.096
	F	18.7%	37.3%	14.9%	15.7%	12.7%	0.7%			
	D	**35.7%**	**35.0%**	**35.1%**	**50.0%**	**53.1%**	**11.1%**			
Retailers, brands or fashion websites	N	37	67	17	19	13	4	7.5	5	0.188
	F	23.6%	42.7%	10.8%	12.1%	8.3%	2.5%			
	D	**52.9%**	**46.9%**	**29.8%**	**45.2%**	**40.6%**	**44.4%**			
Social media and blogs	N	41	69	17	10	4	0	37.3	5	0.000***
	F	29.1%	48.9%	12.1%	7.1%	2.8%	0.0%			
	D	**58.6%**	**48.3%**	**29.8%**	**23.8%**	**12.5%**	**0.00%**			
TV programmes and adverts	N	19	20	6	4	5	0	11.5	5	0.043*
	F	35.2%	37.0%	11.1%	7.4%	9.3%	0.00%			
	D	**27.1%**	**14.0%**	**10.5%**	**9.5%**	**15.6%**	**0.00%**			
Email newsletters from fashion brands	N	18	37	12	9	8	2	0.811	5	0.976
	F	20.9%	43.0%	14.0%	10.5%	9.3%	2.30%			
	D	**25.7%**	**25.9%**	**21.1%**	**21.4%**	**25.0%**	**22.20%**			
Talking with friends and family	N	30	65	12	8	9	1	21.3	5	0.001***
	F	24.0%	52.0%	9.6%	6.4%	7.2%	0.80%			
	D	**42.9%**	**45.5%**	**21.1%**	**19.0%**	**28.1%**	**11.10%**			
Shopping with friends and family	N	42	65	21	11	13	4	14.1	5	0.015*
	F	26.9%	41.7%	13.5%	7.1%	8.3%	2.6%			
	D	**60.0%**	**45.5%**	**36.8%**	**26.2%**	**40.6%**	**44.40%**			
Other	N	4	9	9	10	5	1	14.6	5	0.012*
	F	10.5%	23.7%	23.7%	26.3%	13.2%	2.60%			
	D	**5.7%**	**6.3%**	**15.8%**	**23.8%**	**15.6%**	**11.10%**			

Table 116. Age and Sources of Information 2

Where do you find information on what to do with your old clothes?		Age								
		18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 +	χ^2	df	Sig.
TV programmes and adverts	N	3	5	3	3	1	0	1.7	5	0.888
	F	20.0%	33.3%	20.0%	20.0%	6.7%	0.0%			
	D	**4.3%**	**3.5%**	**5.3%**	**7.1%**	**3.1%**	**0.0%**			
Websites	N	10	27	7	4	2	3	7.3	5	0.198
	F	18.9%	50.9%	13.2%	7.5%	3.8%	5.7%			
	D	**14.3%**	**18.9%**	**12.3%**	**9.5%**	**6.3%**	**33.3%**			
Clothes shops	N	14	18	7	4	5	0	4.8	5	0.444
	F	29.2%	37.5%	14.6%	8.3%	10.4%	0.0%			
	D	**20.0%**	**12.6%**	**12.3%**	**9.5%**	**15.6%**	**0.0%**			
Flyers through the door	N	14	29	12	9	4	3	2.2	5	0.819
	F	19.7%	40.8%	16.9%	12.7%	5.6%	4.2%			
	D	**20.0%**	**20.3%**	**21.1%**	**21.4%**	**12.5%**	**33.3%**			
Magazines and newspapers	N	7	8	6	2	3	0	3.5	5	0.619
	F	26.9%	30.8%	23.1%	7.7%	11.5%	0.0%			
	D	**10.0%**	**5.6%**	**10.5%**	**4.8%**	**9.4%**	**0.0%**			
Talking with friends and family	N	34	56	13	15	9	5	11.6	5	0.041*
	F	25.8%	42.4%	9.8%	11.4%	6.8%	3.8%			
	D	**48.6%**	**39.2%**	**22.8%**	**35.7%**	**28.1%**	**55.6%**			
From what I leant at home growing up	N	46	92	33	20	18	3	7.7	5	0.173
	F	21.7%	43.4%	15.6%	9.4%	8.5%	1.4%			
	D	**65.7%**	**64.3%**	**57.9%**	**47.6%**	**56.3%**	**33.3%**			
From what I learnt at school / college / university	N	15	19	9	5	0	0	10.5	5	0.063
	F	31.3%	39.6%	18.8%	10.4%	0.0%	0.0%			
	D	**21.4%**	**13.3%**	**15.8%**	**11.9%**	**0.0%**	**0.0%**			
From my workplace	N	3	25	6	2	3	0	12.2	5	0.032*
	F	7.7%	64.1%	15.4%	5.1%	7.7%	0.0%			
	D	**4.3%**	**17.5%**	**10.5%**	**4.8%**	**9.4%**	**0.0%**			
Other	N	2	12	7	7	7	0	12.9	5	0.024*
	F	5.7%	34.3%	20.0%	20.0%	20.0%	0.0%			
	D	**2.9%**	**8.4%**	**12.3%**	**16.7%**	**21.9%**	**0.0%**			

Table 117. Education Level and Sources of Information 1

Where do you find information on clothes, fashion and shopping?		Education Level				χ^2	df	Sig.
		Secondary school	Sixth form college	University graduate	University post-graduate			
Magazines and newspapers	N	5	16	52.000	61	3.1	3	0.380
	F	3.7%	11.9%	38.8%	45.5%			
	D	**29.4%**	**29.1%**	**41.3%**	**39.4%**			
Retailers, brands or fashion websites	N	5	30	63	59	8	3	0.047*
	F	3.2%	19.1%	40.1%	37.6%			
	D	**29.4%**	**54.5%**	**50.0%**	**38.1%**			
Social media and blogs	N	3	16	59	63	8.7	3	0.033*
	F	2.1%	11.3%	41.8%	44.7%			
	D	**17.6%**	**29.1%**	**46.8%**	**40.6%**			
TV programmes and adverts	N	2	14	19	19	5.7	3	0.130
	F	3.7%	25.9%	35.2%	35.2%			
	D	**11.8%**	**25.5%**	**15.1%**	**12.3%**			
Email newsletters from fashion brands	N	4	10	35	37	2	3	0.580
	F	4.7%	11.6%	40.7%	43.0%			
	D	**23.5%**	**18.2%**	**27.8%**	**23.9%**			
Talking with friends and family	N	3	20	44	58	2.7	3	0.448
	F	2.4%	16.0%	35.2%	46.4%			
	D	**17.6%**	**36.4%**	**34.9%**	**37.4%**			
Shopping with friends and family	N	9	**23**	60	64	1.8	3	0.619
	F	5.8%	14.7%	38.5%	41.0%			
	D	**52.9%**	**41.8%**	**47.6%**	**41.3%**			
Other	N	2	6	10	20	1.8	3	0.614
	F	5.3%	15.8%	26.3%	52.6%			
	D	**11.8%**	**10.9%**	**7.9%**	**12.9%**			

Table 118. Education Level and Sources of Information 2

Where do you find information on what to do with your old clothes?		Education Level				χ^2	df	Sig.
		Secondary school	Sixth form college	University graduate	University post-graduate			
TV programmes and adverts	N	2	2	5	6	2.5	3	0.477
	F	13.3%	13.3%	33.3%	40.0%			
	D	**11.8%**	**3.6%**	**4.0%**	**3.9%**			
Websites	N	1	4	21	27	4.7	3	0.198
	F	1.9%	7.5%	39.6%	50.9%			
	D	**5.9%**	**7.3%**	**16.7%**	**17.4%**			
Clothes shops	N	0	4	23	21	6.9	3	0.076
	F	0.0%	8.3%	47.9%	43.8%			
	D	**0.0%**	**7.3%**	**18.3%**	**13.5%**			
Flyers through the door	N	3	10	29	29	1	3	0.791
	F	4.2%	14.1%	40.8%	40.8%			
	D	**17.6%**	**18.2%**	**23.0%**	**18.7%**			
Magazines and newspapers	N	1	2	8	15	2.6	3	0.461
	F	3.8%	7.7%	30.8%	57.7%			
	D	**5.9%**	**3.6%**	**6.3%**	**9.7%**			
Talking with friends and family	N	6	23	42	61	1.6	3	0.652
	F	4.5%	17.4%	31.8%	46.2%			
	D	**35.3%**	**41.8%**	**33.3%**	**39.4%**			
From what I leant at home growing up	N	11	39	76	86	4.2	3	0.240
	F	5.2%	18.4%	35.8%	40.6%			
	D	**64.7%**	**70.9%**	**60.3%**	**55.5%**			
From what I learnt at school / college / university	N	0	7	13	28	6.5	3	0.090
	F	0.0%	14.6%	27.1%	58.3%			
	D	**0.0%**	**12.7%**	**10.3%**	**18.1%**			
From my workplace	N	0	2	15	22	6.8	3	0.077
	F	0.0%	5.1%	38.5%	56.4%			
	D	**0.0%**	**3.6%**	**11.9%**	**14.2%**			
Other	N	1	5	12	17	0.6	3	0.904
	F	2.9%	14.3%	34.3%	48.6%			
	D	**5.9%**	**9.1%**	**9.5%**	**11.0%**			

Table 119. Household Income and Sources of Information 1

Where do you find information on clothes, fashion and shopping?		Household income							χ^2	df	Sig.
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.			
Magazines and newspapers	N	15	21	25	29	21	15	6	11.2	6	0.083
	F	11.4%	15.9%	18.9%	22.0%	15.9%	11.4%	4.5%			
	D	**26.3%**	**30.4%**	**43.1%**	**37.2%**	**44.7%**	**57.7%**	**46.2%**			
Retailers, brands or fashion websites	N	22	33	32	27	25	9	5	9.5	6	0.147
	F	14.4%	21.6%	20.9%	17.6%	16.3%	5.9%	3.3%			
	D	**38.6%**	**47.8%**	**55.2%**	**34.6%**	**53.2%**	**34.6%**	**38.5%**			
Social media and blogs	N	32	26	21	32	18	7	4	9	6	0.170
	F	22.9%	18.6%	15.0%	22.9%	12.9%	5.0%	2.9%			
	D	**56.1%**	**37.7%**	**36.2%**	**41.0%**	**38.3%**	**26.9%**	**30.8%**			
TV programmes and adverts	N	8	11	9	13	6	5	2	0.7	6	0.994
	F	14.8%	20.4%	16.7%	24.1%	11.1%	9.3%	3.7%			
	D	**14.0%**	**15.9%**	**15.5%**	**16.7%**	**12.8%**	**19.2%**	**15.4%**			
Email newsletters from fashion brands	N	14	9	17	18	16	7	3	8.2	6	0.226
	F	16.7%	10.7%	20.2%	21.4%	19.0%	8.3%	3.6%			
	D	**24.6%**	**13.0%**	**29.3%**	**23.1%**	**34.0%**	**26.9%**	**23.1%**			
Talking with friends and family	N	21	23	27	31	10	7	5	8.9	6	0.178
	F	16.9%	18.5%	21.8%	25.0%	8.1%	5.6%	4.0%			
	D	**36.8%**	**33.3%**	**46.6%**	**39.7%**	**21.3%**	**26.9%**	**38.5%**			
Shopping with friends and family	N	31	33	27	32	20	5	6	9.9	6	0.131
	F	20.1%	21.4%	17.5%	20.8%	13.0%	3.2%	3.9%			
	D	**54.4%**	**47.8%**	**46.6%**	**41.0%**	**42.6%**	**19.2%**	**46.2%**			
Other	N	2	12	3	8	6	5	1	10.6	6	0.103
	F	5.4%	32.4%	8.1%	21.6%	16.2%	13.5%	2.7%			
	D	**3.5%**	**17.4%**	**5.2%**	**10.3%**	**12.8%**	**19.2%**	**7.7%**			

Table 120. Household Income and Sources of Information 2

Where do you find information on what to do with your old clothes?		Household income									
		Under £10,000 p.a.	£10,000 to £20,000 p.a.	£20,000 to £30,000 p.a.	£30,000 to £50,000 p.a.	£50,000 to £70,000 p.a.	£70,000 to £100,000 p.a.	£100,000+ p.a.	χ^2	df	Sig.
TV programmes and adverts	N	4	2	2	1	3	0	3	16	6	0.014*
	F	26.7%	13.3%	13.3%	6.7%	20.0%	0.0%	20.0%			
	D	**7.0%**	**2.9%**	**3.4%**	**1.3%**	**6.4%**	**0.0%**	**23.1%**			
Websites	N	17	10	9	9	6	2	0	14	6	0.03*
	F	32.1%	18.9%	17.0%	17.0%	11.3%	3.8%	0.0%			
	D	**29.8%**	**14.5%**	**15.5%**	**11.5%**	**12.8%**	**7.7%**	**0.0%**			
Clothes shops	N	12	7	9	12	5	1	2	6.2	6	0.402
	F	25.0%	14.6%	18.8%	25.0%	10.4%	2.1%	4.2%			
	D	**21.1%**	**10.1%**	**15.5%**	**15.4%**	**10.6%**	**3.8%**	**15.4%**			
Flyers through the door	N	6	14	13	19	12	3	1	7.7	6	0.259
	F	8.8%	20.6%	19.1%	27.9%	17.6%	4.4%	1.5%			
	D	**10.5%**	**20.3%**	**22.4%**	**24.4%**	**25.5%**	**11.5%**	**7.7%**			
Magazines and newspapers	N	7	7	3	5	3	0	1	5.3	6	0.497
	F	26.9%	26.9%	11.5%	19.2%	11.5%	0.0%	3.8%			
	D	**12.3%**	**10.1%**	**5.2%**	**6.4%**	**6.4%**	**0.0%**	**7.7%**			
Talking with friends and family	N	26	27	18	27	17	10	5	3	6	0.803
	F	20.0%	20.8%	13.8%	20.8%	13.1%	7.7%	3.8%			
	D	**45.6%**	**39.1%**	**31.0%**	**34.6%**	**36.2%**	**38.5%**	**38.5%**			
From what I leant at home growing up	N	34	48	31	50	27	15	5	7	6	0.328
	F	16.2%	22.9%	14.8%	23.8%	12.9%	7.1%	2.4%			
	D	**59.6%**	**69.6%**	**53.4%**	**64.1%**	**57.4%**	**57.7%**	**38.5%**			
From what I learnt at school / college / university	N	15	7	7	8	7	2	2	10.1	6	0.119
	F	31.3%	14.6%	14.6%	16.7%	14.6%	4.2%	4.2%			
	D	**26.3%**	**10.1%**	**12.1%**	**10.3%**	**14.9%**	**7.7%**	**15.4%**			
From my workplace	N	7	7	3	7	11	3	1	9.9	6	0.131
	F	17.9%	17.9%	7.7%	17.9%	28.2%	7.7%	2.6%			
	D	**12.3%**	**10.1%**	**5.2%**	**9.0%**	**23.4%**	**11.5%**	**7.7%**			
Other	N	2	6	4	11	5	3	2	5.5	6	0.477
	F	6.1%	18.2%	12.1%	33.3%	15.2%	9.1%	6.1%			
	D	**3.5%**	**8.7%**	**6.9%**	**14.1%**	**10.6%**	**11.5%**	**15.4%**			

Table 121. Employment Status and Sources of Information 1

Where do you find information on clothes, fashion and shopping?		Employment status									χ^2	df	Sig.
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other			
Magazines and newspapers	N	52	24	3	0	24	2	1	23	5	9.8	8	0.278
	F	38.8%	17.9%	2.2%	0.0%	17.9%	1.5%	.7%	17.2%	3.7%			
	D	**38.0%**	**39.3%**	**23.1%**	**0.0%**	**49.0%**	**25.0%**	**100.0%**	**35.9%**	**35.7%**			
Retailers, brands or fashion websites	N	60	26	5	2	24	3	0	33	4	4.7	8	0.789
	F	38.2%	16.6%	3.2%	1.3%	15.3%	1.9%	0.0%	21.0%	2.5%			
	D	**43.8%**	**42.6%**	**38.5%**	**33.3%**	**49.0%**	**37.5%**	**0.0%**	**51.6%**	**28.6%**			
Social media and blogs	N	52	25	7	2	22	0	1	29	3	11.5	8	0.175
	F	36.9%	17.7%	5.0%	1.4%	15.6%	0.0%	.7%	20.6%	2.1%			
	D	**38.0%**	**41.0%**	**53.8%**	**33.3%**	**44.9%**	**0.0%**	**100.0%**	**45.3%**	**21.4%**			
TV programmes and adverts	N	22	6	1	0	3	1	0	14	7	21.7	8	0.006***
	F	40.7%	11.1%	1.9%	0.0%	5.6%	1.9%	0.0%	25.9%	13.0%			
	D	**16.1%**	**9.8%**	**7.7%**	**0.0%**	**6.1%**	**12.5%**	**0.0%**	**21.9%**	**50.0%**			
Email newsletters from fashion brands	N	44	11	5	2	8	1	0	12	3	11.3	8	0.187
	F	51.2%	12.8%	5.8%	2.3%	9.3%	1.2%	0.0%	14.0%	3.5%			
	D	**32.1%**	**18.0%**	**38.5%**	**33.3%**	**16.3%**	**12.5%**	**0.0%**	**18.8%**	**21.4%**			
Talking with friends and family	N	40	22	4	1	20	2	1	25	10	14.5	8	0.069
	F	32.0%	17.6%	3.2%	.8%	16.0%	1.6%	.8%	20.0%	8.0%			
	D	**29.2%**	**36.1%**	**30.8%**	**16.7%**	**40.8%**	**25.0%**	**100.0%**	**39.1%**	**71.4%**			
Shopping with friends and family	N	62	27	4	1	18	3	0	34	7	7.2	8	0.519
	F	39.7%	17.3%	2.6%	.6%	11.5%	1.9%	0.0%	21.8%	4.5%			
	D	**45.3%**	**44.3%**	**30.8%**	**16.7%**	**36.7%**	**37.5%**	**0.0%**	**53.1%**	**50.0%**			
Other	N	15	2	2	1	5	1	1	8	3	14.3	8	0.075
	F	39.5%	5.3%	5.3%	2.6%	13.2%	2.6%	2.6%	21.1%	7.9%			
	D	**10.9%**	**3.3%**	**15.4%**	**16.7%**	**10.2%**	**12.5%**	**100.0%**	**12.5%**	**21.4%**			

Table 122. Employment Status and Sources of Information 2

Where do you find information on what to do with your old clothes?		Employment status									χ^2	df	Sig.
		Employed, working full-time	Employed, working part-time	Not employed, looking for work	Not employed, NOT looking for work	Self employed	Retired	Disabled, not able to work	In education or training	Other			
TV programmes and adverts	N	6	1	1	0	3	0	0	3	1	2.8	8	0.946
	F	40.0%	6.7%	6.7%	0.0%	20.0%	0.0%	0.0%	20.0%	6.7%			
	D	**4.4%**	**1.6%**	**7.7%**	**0.0%**	**6.1%**	**0.0%**	**0.0%**	**4.7%**	**7.1%**			
Websites	N	16	6	1	1	10	2	0	13	4	8.3	8	0.397
	F	30.2%	11.3%	1.9%	1.9%	18.9%	3.8%	0.0%	24.5%	7.5%			
	D	**11.7%**	**9.8%**	**7.7%**	**16.7%**	**20.4%**	**25.0%**	**0.0%**	**20.3%**	**28.6%**			
Clothes shops	N	21	6	2	0	4	0	0	13	2	7.2	8	0.518
	F	43.8%	12.5%	4.2%	0.0%	8.3%	0.0%	0.0%	27.1%	4.2%			
	D	**15.3%**	**9.8%**	**15.4%**	**0.0%**	**8.2%**	**0.0%**	**0.0%**	**20.3%**	**14.3%**			
Flyers through the door	N	32	7	3	2	10	1	0	13	3	5	8	0.756
	F	45.1%	9.9%	4.2%	2.8%	14.1%	1.4%	0.0%	18.3%	4.2%			
	D	**23.4%**	**11.5%**	**23.1%**	**33.3%**	**20.4%**	**12.5%**	**0.0%**	**20.3%**	**21.4%**			
Magazines and newspapers	N	3	4	3	0	9	0	0	6	1	20.4	8	0.009**
	F	11.5%	15.4%	11.5%	0.0%	34.6%	0.0%	0.0%	23.1%	3.8%			
	D	**2.2%**	**6.6%**	**23.1%**	**0.0%**	**18.4%**	**0.0%**	**0.0%**	**9.4%**	**7.1%**			
Talking with friends and family	N	44	19	7	3	18	5	1	30	5	10.9	8	0.209
	F	33.3%	14.4%	5.3%	2.3%	13.6%	3.8%	.8%	22.7%	3.8%			
	D	**32.1%**	**31.1%**	**53.8%**	**50.0%**	**36.7%**	**62.5%**	**100.0%**	**46.9%**	**35.7%**			
From what I leant at home growing up	N	85	37	5	3	27	3	1	41	10	7.1	8	0.530
	F	40.1%	17.5%	2.4%	1.4%	12.7%	1.4%	.5%	19.3%	4.7%			
	D	**62.0%**	**60.7%**	**38.5%**	**50.0%**	**55.1%**	**37.5%**	**100.0%**	**64.1%**	**71.4%**			
From what I learnt at school etc...	N	13	10	1	1	9	0	0	12	2	6.6	8	0.578
	F	27.1%	20.8%	2.1%	2.1%	18.8%	0.0%	0.0%	25.0%	4.2%			
	D	**9.5%**	**16.4%**	**7.7%**	**16.7%**	**18.4%**	**0.0%**	**0.0%**	**18.8%**	**14.3%**			
From my workplace	N	21	8	0	0	5	0	0	3	2	9.1	8	0.333
	F	53.8%	20.5%	0.0%	0.0%	12.8%	0.0%	0.0%	7.7%	5.1%			
	D	**15.3%**	**13.1%**	**0.0%**	**0.0%**	**10.2%**	**0.0%**	**0.0%**	**4.7%**	**14.3%**			
Other	N	14	6	0	0	4	2	1	6	2	13.7	8	0.089
	F	40.0%	17.1%	0.0%	0.0%	11.4%	5.7%	2.9%	17.1%	5.7%			
	D	**10.2%**	**9.8%**	**0.0%**	**0.0%**	**8.2%**	**25.0%**	**100.0%**	**9.4%**	**14.3%**			

Table 123. Relationship Status and Sources of Information 1

Where do you find information on clothes, fashion and shopping?		Relationship status										
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other	χ^2	df	Sig.
Magazines and newspapers	N	44	1	7	2	11	27	39	3	5.3	7	.618
	F	32.8%	.7%	5.2%	1.5%	8.2%	20.1%	29.1%	2.2%			
	D	**43.6%**	**100.0%**	**50.0%**	**40.0%**	**36.7%**	**34.6%**	**34.5%**	**27.3%**			
Retailers, brands or fashion websites	N	41	1	10	1	9	32	59	4	13.2	7	.069
	F	26.1%	.6%	6.4%	.6%	5.7%	20.4%	37.6%	2.5%			
	D	**40.6%**	**100.0%**	**71.4%**	**20.0%**	**30.0%**	**41.0%**	**52.2%**	**36.4%**			
Social media and blogs	N	27	1	2	1	11	31	62	6	25.1	7	0.001***
	F	19.1%	.7%	1.4%	.7%	7.8%	22.0%	44.0%	4.3%			
	D	**26.7%**	**100.0%**	**14.3%**	**20.0%**	**36.7%**	**39.7%**	**54.9%**	**54.5%**			
TV programmes and adverts	N	11	0	2	0	6	11	24	0	8.3	7	.309
	F	20.4%	0.0%	3.7%	0.0%	11.1%	20.4%	44.4%	0.0%			
	D	**10.9%**	**0.0%**	**14.3%**	**0.0%**	**20.0%**	**14.1%**	**21.2%**	**0.0%**			
Email newsletters from fashion brands	N	23	1	3	1	8	18	30	2	4	7	.775
	F	26.7%	1.2%	3.5%	1.2%	9.3%	20.9%	34.9%	2.3%			
	D	**22.8%**	**100.0%**	**21.4%**	**20.0%**	**26.7%**	**23.1%**	**26.5%**	**18.2%**			
Talking with friends and family	N	30	0	4	1	12	25	50	3	7.6	7	.366
	F	24.0%	0.0%	3.2%	.8%	9.6%	20.0%	40.0%	2.4%			
	D	**29.7%**	**0.0%**	**28.6%**	**20.0%**	**40.0%**	**32.1%**	**44.2%**	**27.3%**			
Shopping with friends and family	N	44	1	5	2	11	34	56	3	5	7	.658
	F	28.2%	.6%	3.2%	1.3%	7.1%	21.8%	35.9%	1.9%			
	D	**43.6%**	**100.0%**	**35.7%**	**40.0%**	**36.7%**	**43.6%**	**49.6%**	**27.3%**			
Other	N	10	1	2	1	3	11	7	3	15.5	7	0.03*
	F	26.3%	2.6%	5.3%	2.6%	7.9%	28.9%	18.4%	7.9%			
	D	**9.9%**	**100.0%**	**14.3%**	**20.0%**	**10.0%**	**14.1%**	**6.2%**	**27.3%**			

Table 124. Relationship Status and Sources of Information 2

Where do you find information on what to do with your old clothes?		Relationship status										
		Married	Widowed	Divorced	Separated	Civil Partnership	Cohabiting	Single	Other	χ^2	df	Sig.
TV programmes and adverts	N	5	0	1	0	0	2	7	0	4.1	7	.769
	F	33.3%	0.0%	6.7%	0.0%	0.0%	13.3%	46.7%	0.0%			
	D	**5.0%**	**0.0%**	**7.1%**	**0.0%**	**0.0%**	**2.6%**	**6.2%**	**0.0%**			
Websites	N	14	0	0	1	0	13	23	2	10.9	7	.142
	F	26.4%	0.0%	0.0%	1.9%	0.0%	24.5%	43.4%	3.8%			
	D	**13.9%**	**0.0%**	**0.0%**	**20.0%**	**0.0%**	**16.7%**	**20.4%**	**18.2%**			
Clothes shops	N	13	0	2	0	2	10	20	1	4	7	.772
	F	27.1%	0.0%	4.2%	0.0%	4.2%	20.8%	41.7%	2.1%			
	D	**12.9%**	**0.0%**	**14.3%**	**0.0%**	**6.7%**	**12.8%**	**17.7%**	**9.1%**			
Flyers through the door	N	25	0	2	0	5	13	22	4	5.8	7	.564
	F	35.2%	0.0%	2.8%	0.0%	7.0%	18.3%	31.0%	5.6%			
	D	**24.8%**	**0.0%**	**14.3%**	**0.0%**	**16.7%**	**16.7%**	**19.5%**	**36.4%**			
Magazines and newspapers	N	6	0	2	0	1	4	12	1	4.9	7	.678
	F	23.1%	0.0%	7.7%	0.0%	3.8%	15.4%	46.2%	3.8%			
	D	**5.9%**	**0.0%**	**14.3%**	**0.0%**	**3.3%**	**5.1%**	**10.6%**	**9.1%**			
Talking with friends and family	N	33	1	4	1	10	26	55	2	12.4	7	.089
	F	25.0%	.8%	3.0%	.8%	7.6%	19.7%	41.7%	1.5%			
	D	**32.7%**	**100.0%**	**28.6%**	**20.0%**	**33.3%**	**33.3%**	**48.7%**	**18.2%**			
From what I leant at home growing up	N	57	0	9	3	19	45	74	5	4.8	7	.679
	F	26.9%	0.0%	4.2%	1.4%	9.0%	21.2%	34.9%	2.4%			
	D	**56.4%**	**0.0%**	**64.3%**	**60.0%**	**63.3%**	**57.7%**	**65.5%**	**45.5%**			
From what I learnt at school / college / university	N	11	0	0	1	3	11	21	1	6.1	7	.529
	F	22.9%	0.0%	0.0%	2.1%	6.3%	22.9%	43.8%	2.1%			
	D	**10.9%**	**0.0%**	**0.0%**	**20.0%**	**10.0%**	**14.1%**	**18.6%**	**9.1%**			
From my workplace	N	14	0	0	0	3	7	15	0	5.6	7	.586
	F	35.9%	0.0%	0.0%	0.0%	7.7%	17.9%	38.5%	0.0%			
	D	**13.9%**	**0.0%**	**0.0%**	**0.0%**	**10.0%**	**9.0%**	**13.3%**	**0.0%**			
Other	N	14	1	2	0	2	3	11	2	16.1	7	0.024*
	F	40.0%	2.9%	5.7%	0.0%	5.7%	8.6%	31.4%	5.7%			
	D	**13.9%**	**100.0%**	**14.3%**	**0.0%**	**6.7%**	**3.8%**	**9.7%**	**18.2%**			

Table 125. Children at Home and Sources of Information

Where do you find information on clothes, fashion and shopping?		Children at Home					
		Yes	No	Other	χ^2	df	Sig.
Magazines and newspapers	N	32	100	1	2	2	0.377
	F	24.1%	75.2%	.8%			
	D	40.5%	37.0%	100.0%			
Retailers, brands or fashion websites	N	33	123	0	1.2	2	0.560
	F	21.2%	78.8%	0.0%			
	D	41.8%	45.6%	0.0%			
Social media and blogs	N	27	111	0	2	2	0.390
	F	19.6%	80.4%	0.0%			
	D	34.2%	41.1%	0.0%			
TV programmes and adverts	N	9	45	0	1.5	2	0.476
	F	16.7%	83.3%	0.0%			
	D	11.4%	16.7%	0.0%			
Email newsletters from fashion brands	N	19	65	1	3.1	2	0.209
	F	22.4%	76.5%	1.2%			
	D	24.1%	24.1%	100.0%			
Talking with friends and family	N	25	99	0	1.2	2	0.542
	F	20.2%	79.8%	0.0%			
	D	31.6%	36.7%	0.0%			
Shopping with friends and family	N	26	129	1	6.7	2	0.035*
	F	16.7%	82.7%	.6%			
	D	32.9%	47.8%	100.0%			
Other	N	12	26	0	2.1	2	0.354
	F	31.6%	68.4%	0.0%			
	D	15.2%	9.6%	0.0%			

Table 126. Children at Home and Sources of Information

Where do you find information on what to do with your old clothes?		Children at Home					
		Yes	No	Other	χ^2	df	Sig.
TV programmes and adverts	N	4	9	1	24.6	2	0.000***
	F	28.6%	64.3%	7.1%			
	D	5.1%	3.3%	100.0%			
Websites	N	8	44	0	2	2	0.365
	F	15.4%	84.6%	0.0%			
	D	10.1%	16.3%	0.0%			
Clothes shops	N	10	37	0	0.2	2	0.899
	F	21.3%	78.7%	0.0%			
	D	12.7%	13.7%	0.0%			
Flyers through the door	N	16	55	0	0.3	2	0.880
	F	22.5%	77.5%	0.0%			
	D	20.3%	20.4%	0.0%			
Magazines and newspapers	N	4	20	0	0.6	2	0.741
	F	16.7%	83.3%	0.0%			
	D	5.1%	7.4%	0.0%			
Talking with friends and family	N	24	105	1	3.6	2	0.166
	F	18.5%	80.8%	.8%			
	D	30.4%	38.9%	100.0%			
From what I leant at home growing up	N	44	166	1	1.5	2	0.469
	F	20.9%	78.7%	.5%			
	D	55.7%	61.5%	100.0%			
From what I learnt at school / college / university	N	10	38	0	0.3	2	0.877
	F	20.8%	79.2%	0.0%			
	D	12.7%	14.1%	0.0%			
From my workplace	N	6	33	0	1.5	2	0.485
	F	15.4%	84.6%	0.0%			
	D	7.6%	12.2%	0.0%			
Other	N	11	24	0	1.8	2	0.400
	F	31.4%	68.6%	0.0%			
	D	13.9%	8.9%	0.0%			

Table 127. Information Sources or Category by Theme

Q18 & Q19 - Information Source / Category by Theme	N
Don't seek information	13
Own ideas	11
Online	8
Charity info	7
Workplace / business / industry	5
Council information	4
Peers / Comparison	4
Absorb information from all around	3
Creativity	3
Own research	3
Recycling banks	3
Shops	3
None of the above	2
Publications	2
Street style	2
Talking to young people	2
Don't know	1
Other countries	1
TV	1

Table 128. Responses to Q18 'Other' Sources of Information on 'Fashion and Shopping'

'Fashion discourses with students / young people'
'Looking online and eBay'
'None of the above'
'Street style'
'My creative perspectives'
'Don't seek out information at all'
'Free magazine (Stylist) and Pinterest'
'I don't really get info!'
'I go to the shops and look'
'I don't'
'I don't seek out this kind of information.'
'Absorb info from all of above, but don't actively seek this info'
'Ex fashion student - just sort of absorb it from somewhere!'
'Looking around me, browsing shops.'
'Seeing what's on TV and in store, what others are wearing'
'Don't really think too much about fashion'
'I don't really look for fashion information'
'None'
'Ethical Consumer Magazine'
'I don't 'find information' specifically'
'I have my own ideas'
'Talking at work'
'I don't. I buy what I like that suits me.'
'Shopping on my own'
'Ecoblogs'
'I don't really look for fashion information. Maybe online.'
'Watching others on the street and when commuting'
'Not interested in any of the above. If I see something that excites me I try it on'
'Seeing what's in the shops and noticing what young women are wearing in public.'
'I don't'
'I don't really'
'Unsure'
'Browsing online'
'Visiting international locations France, Italy, Belgium, Dubai etc'
'I don't seek it out'
'Pinterest'
'Searching the net'
'Instagram'

Table 129. Responses to Q19 'Other' Sources of Information on 'What to do With Old Clothes'

'Charity bags that we receive through the door'
'Looking around me'
'From my own research and interest in sustainable fashion
'From my business'
'Playing around with fabric, reading books'
'I don't'
'Local council information'
'I have never sought this type of information'
'I don't '
'Looking out around town.'
'Local community advertising/initiatives'
'Seeing the charity shops on the High Street'
'I just use my own mind'
'Clothes banks at supermarkets'
'Again, looking around me, visiting charity shops, seeing recycling bins.'
'Just by keeping my eyes open!'
'I work for a household recycling company'
'Charity shops'
'It's obvious'
'Seeing clothes recycling banks on the street'
'In industry contacts'
'I was hardly informed before I worked for an ethical brand.'
'None of these fit really. I just do what I do'
'Nearest charity shop'
'Through my art practice / research inquiry'
'Local council mailings'
'I know charity shops exist'
'Council notices about recycling'
'Giving away clothes to mates and if they didn't t want them charity shops seemed obvious'
'Local charity shop'
'Seeing recycling opportunities'
'Never asked'
'I just thought it was socially responsible.'
'Internet'

10.5.6.3 Fashion Influences and Information Graphs and Charts

Q8. To what extent do you agree with the following statements?

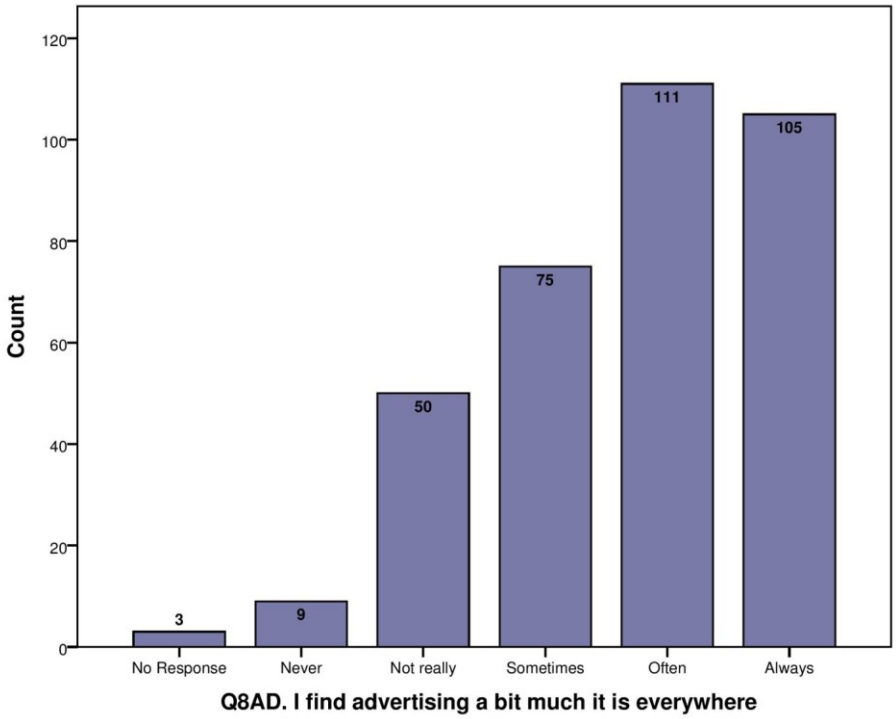


Figure 212. Q8AD. I find advertising a bit much, it is everywhere

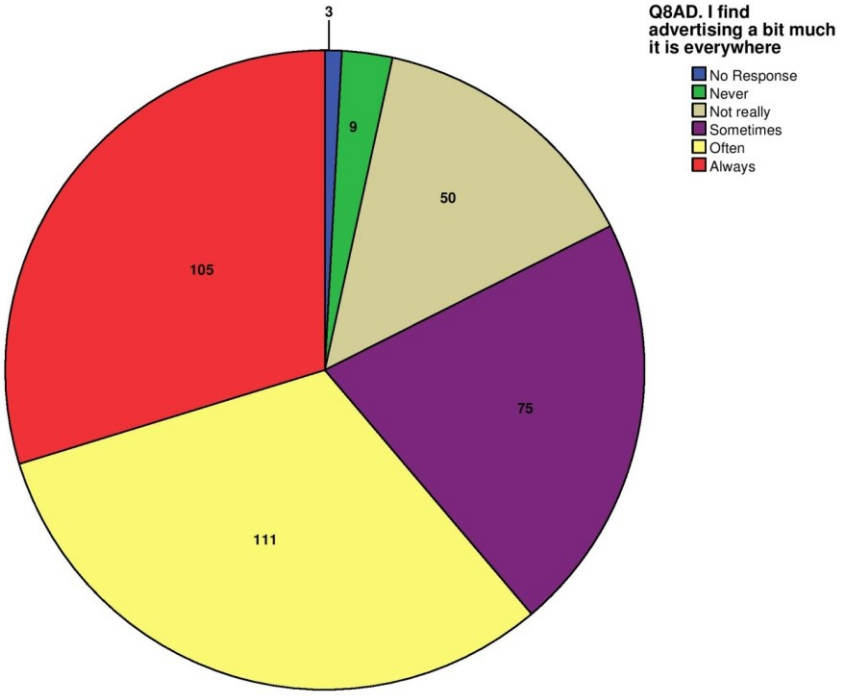


Figure 213. Q8AD. I find advertising a bit much, it is everywhere

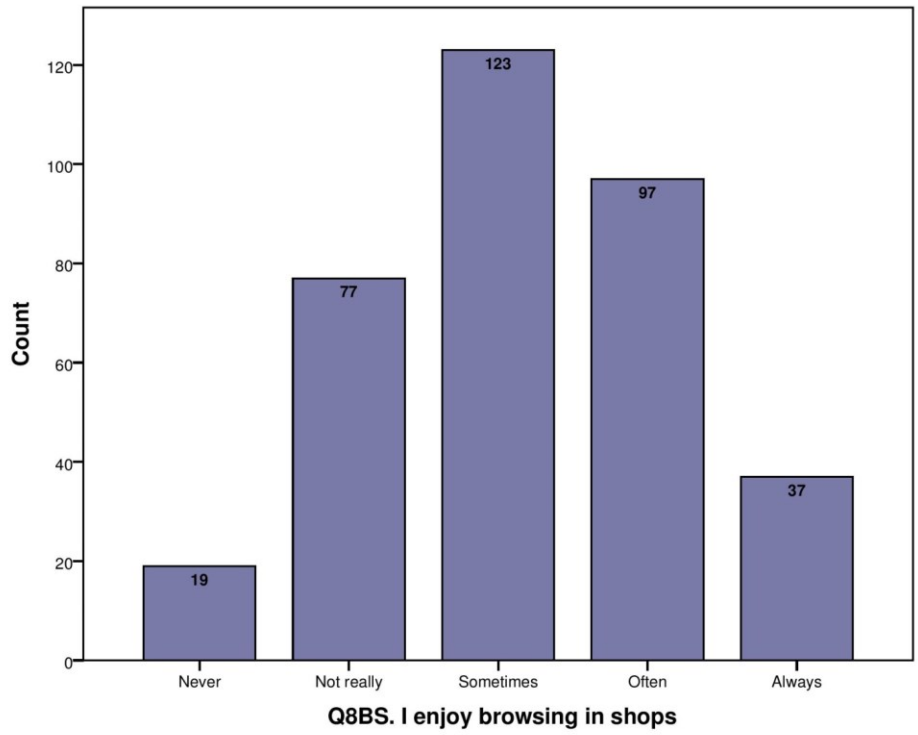


Figure 214. Q8BS. I enjoy browsing in shops

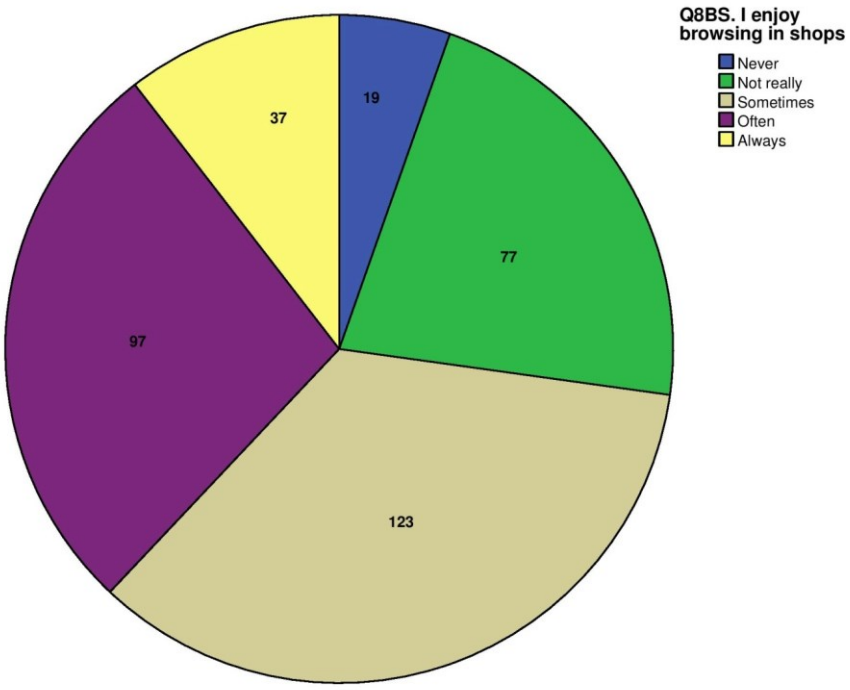


Figure 215. Q8BS. I enjoy browsing in shops

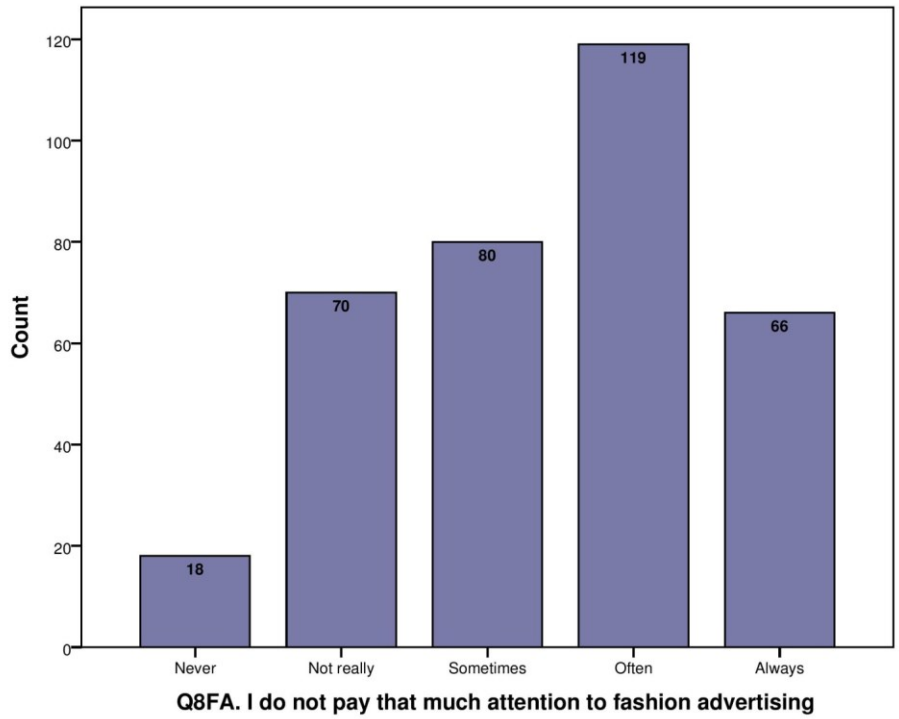


Figure 216. Q8FA. I do not pay that much attention to fashion advertising

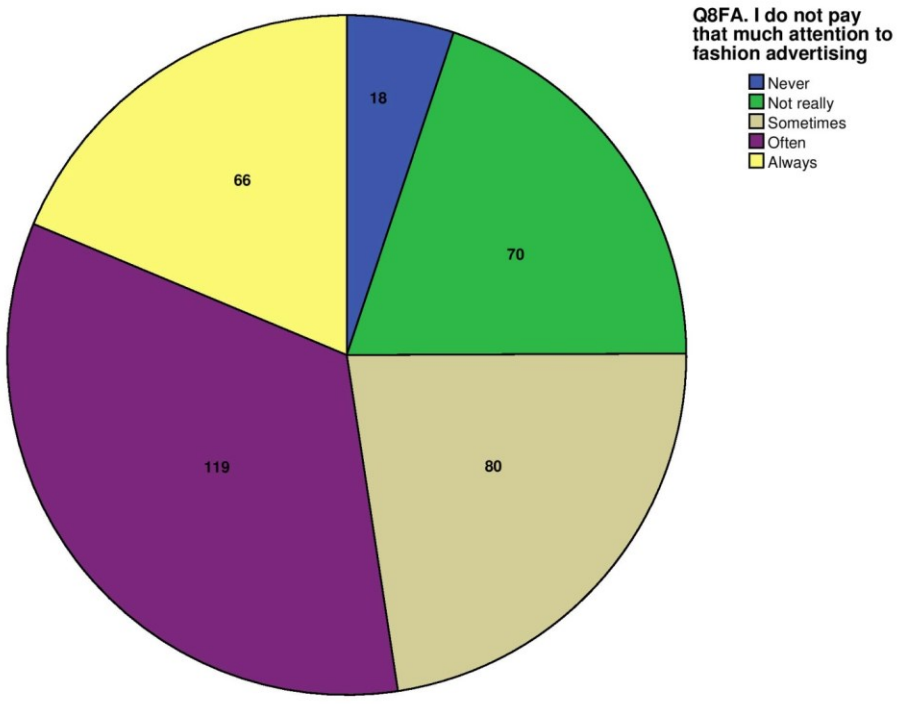


Figure 217. Q8FA. I do not pay that much attention to fashion advertising

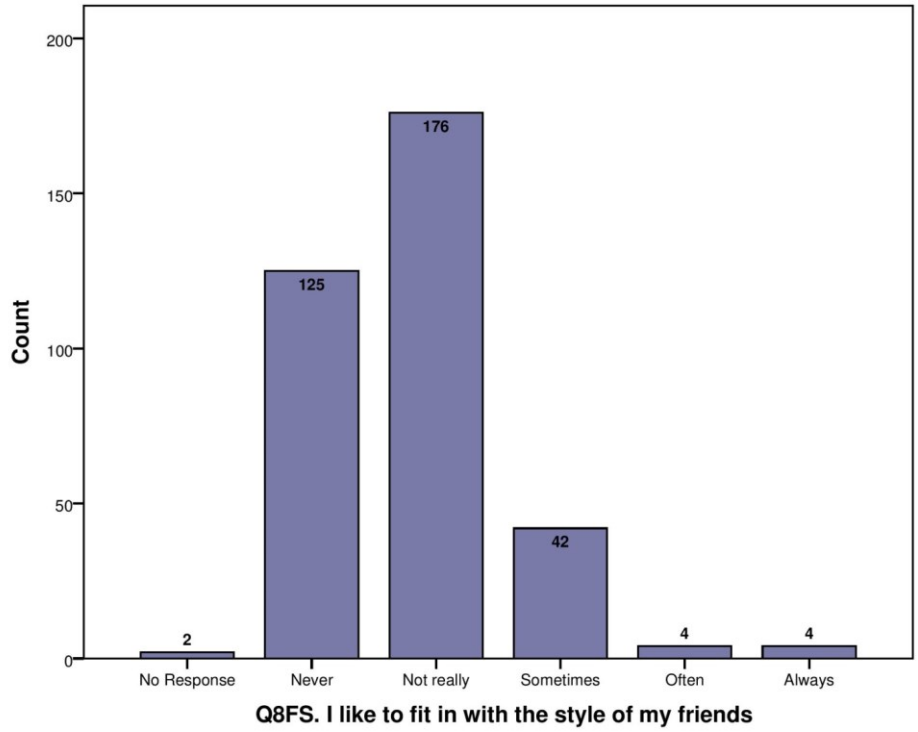


Figure 218. Q8FS. I like to fit in with the style of my friends

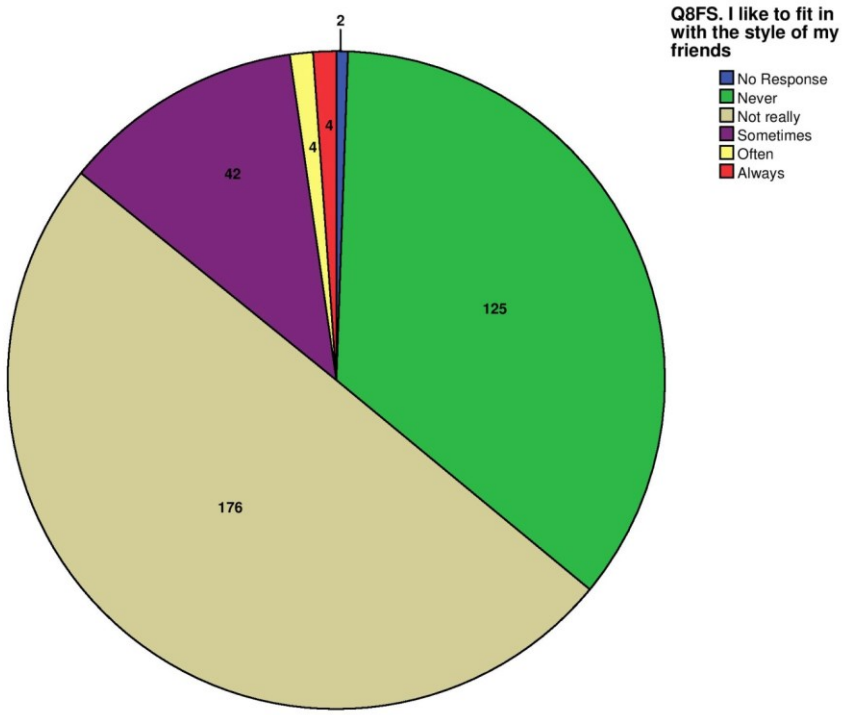


Figure 219. Q8FS. I like to fit in with the style of my friends

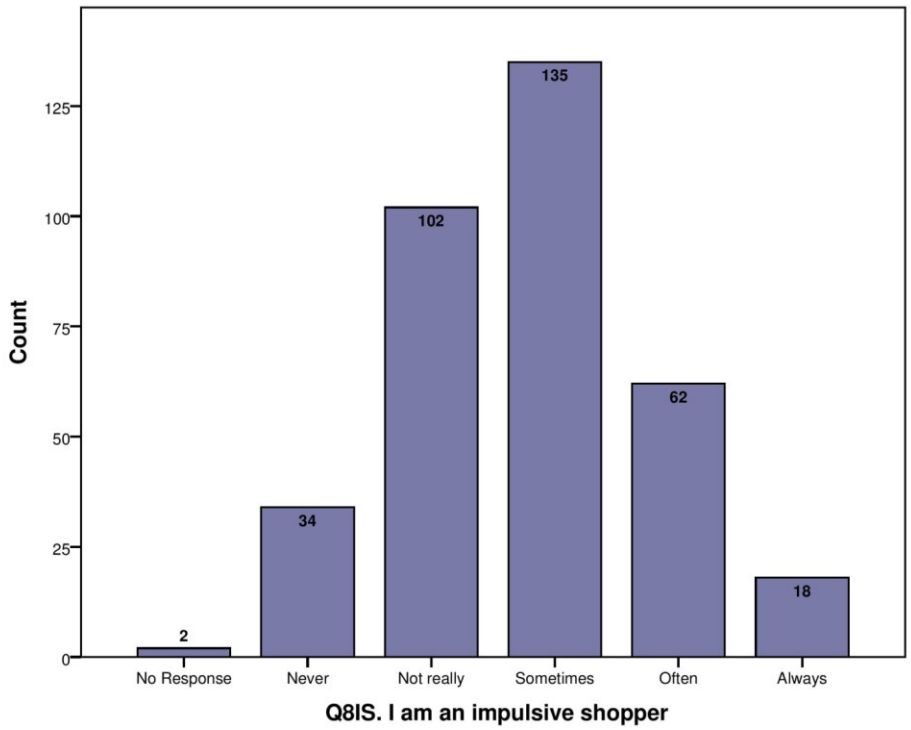


Figure 220. Q8IS. I am an impulsive shopper

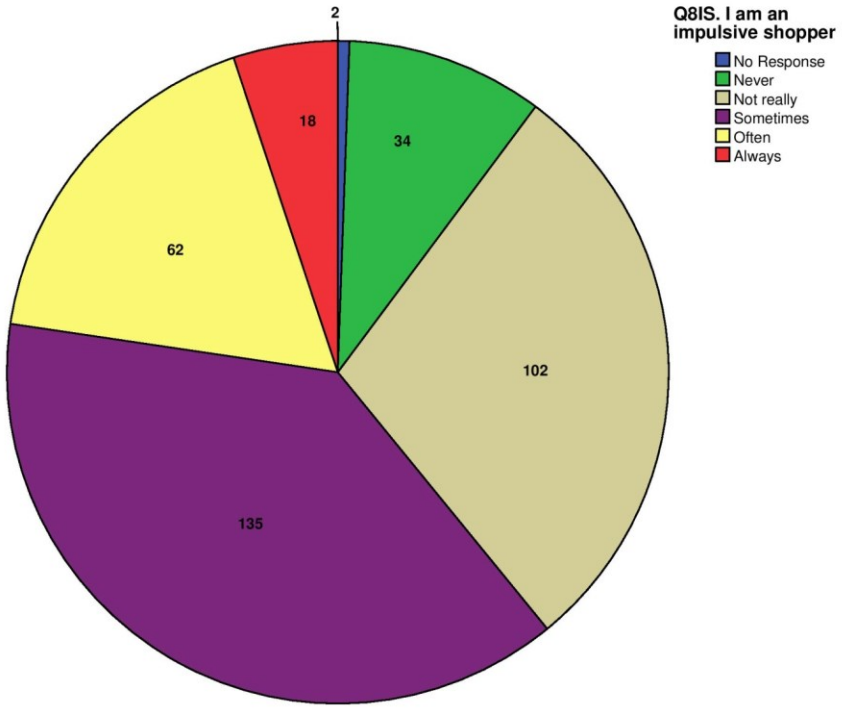


Figure 221. Q8IS. I am an impulsive shopper

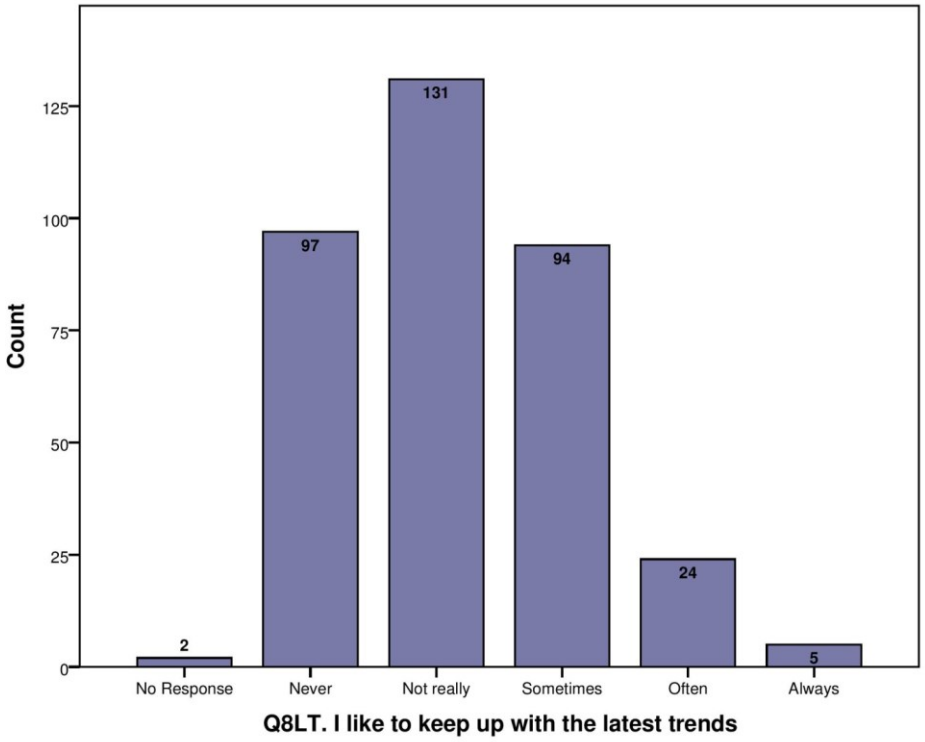


Figure 222. Q8LT. I like to keep up with the latest trends

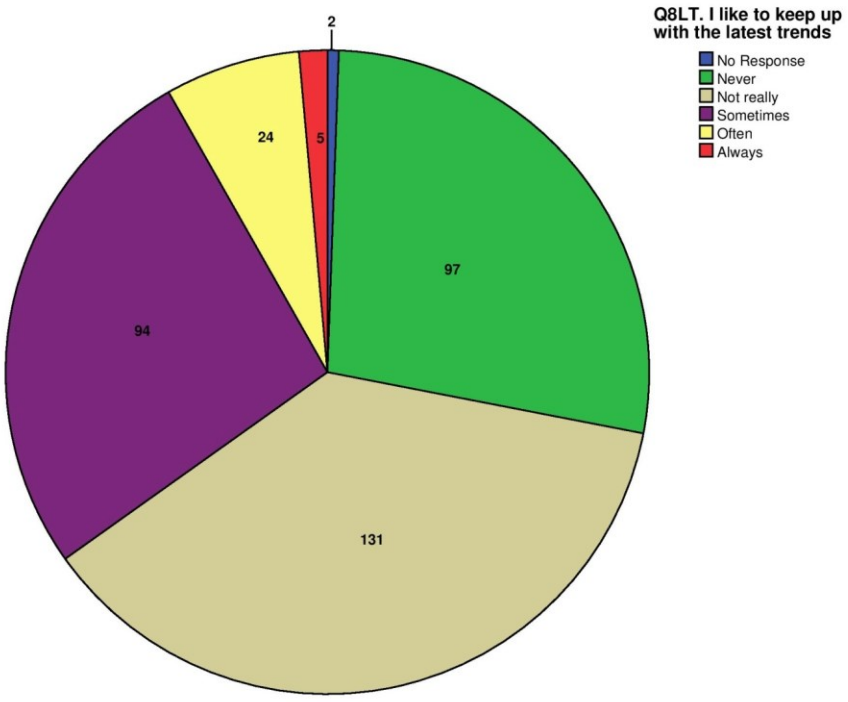


Figure 223. Q8LT. I like to keep up with the latest trends

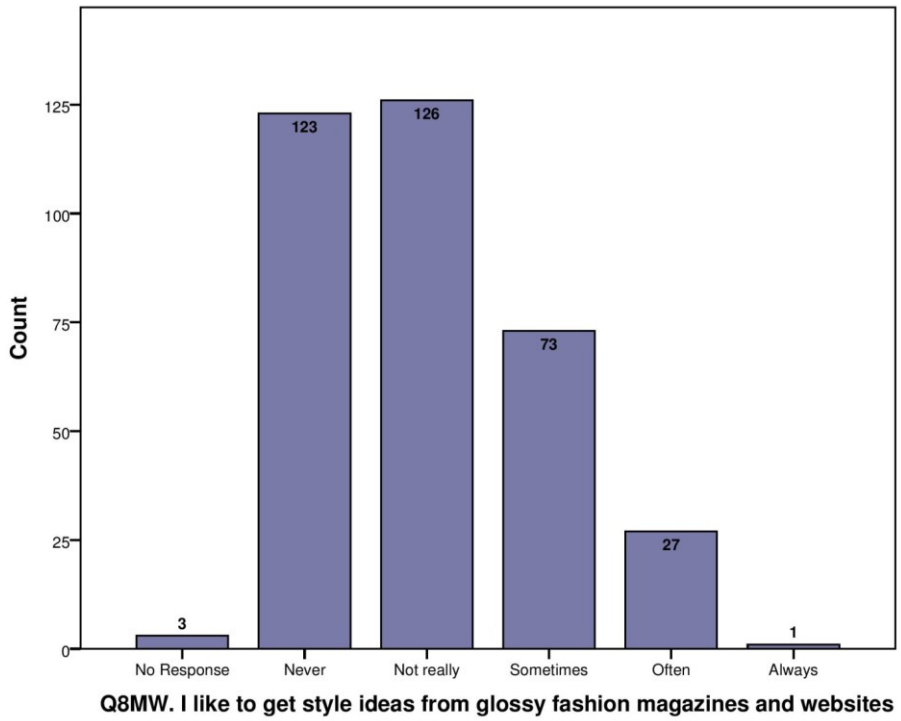


Figure 224. Q8MW. I like to get style ideas from glossy fashion magazines

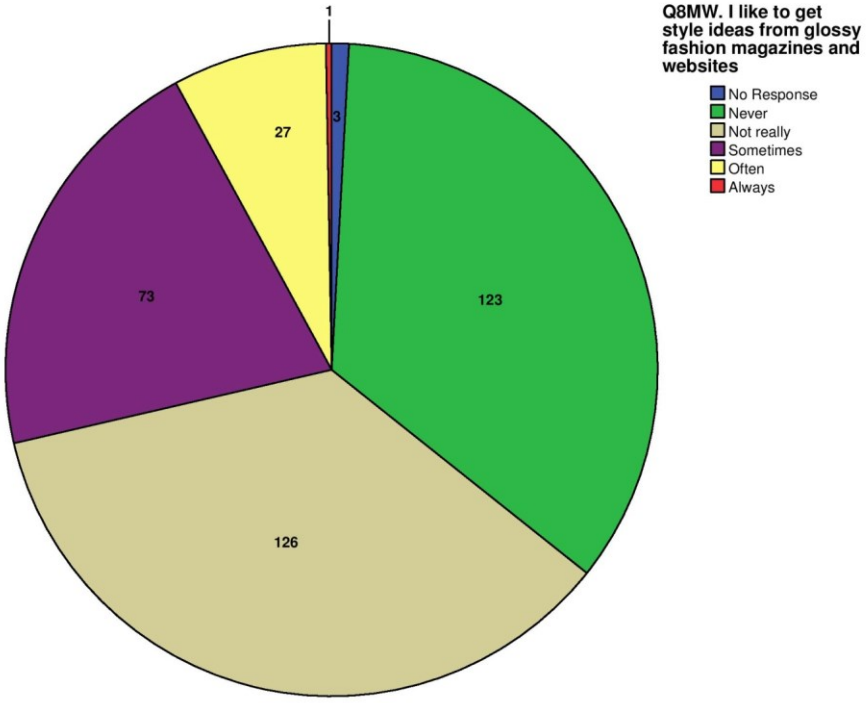


Figure 225. Q8MW. I like to get style ideas from glossy fashion magazines

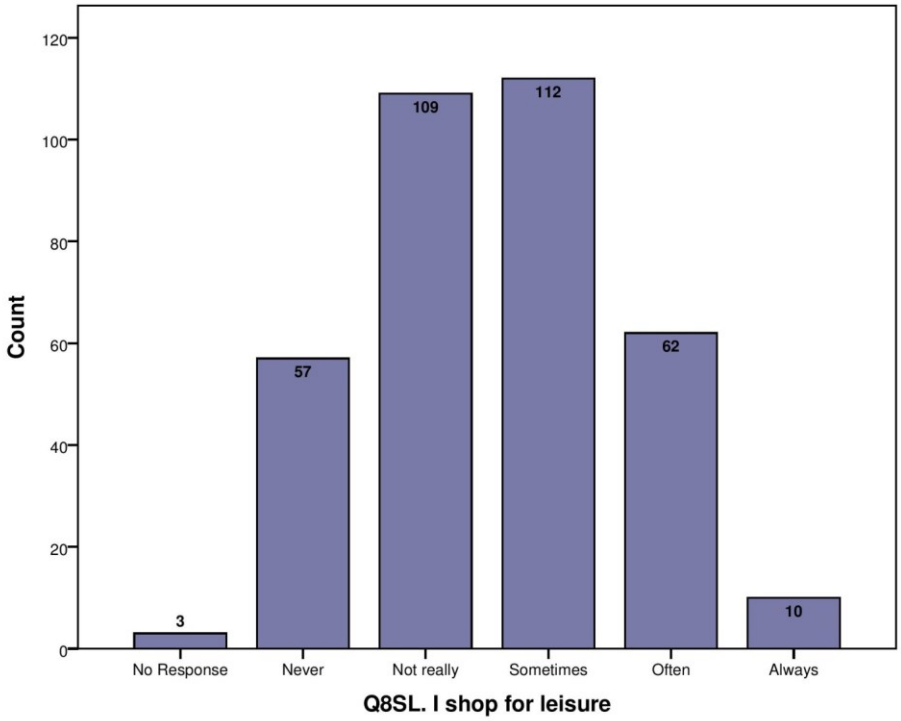


Figure 226. Q8SL. I shop for leisure

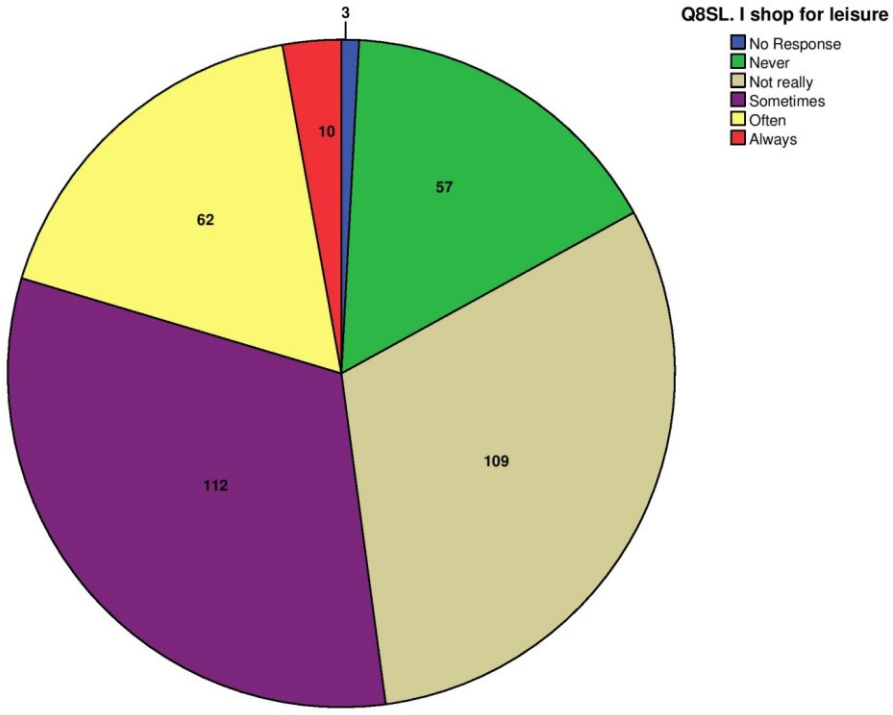


Figure 227. Q8SL. I shop for leisure

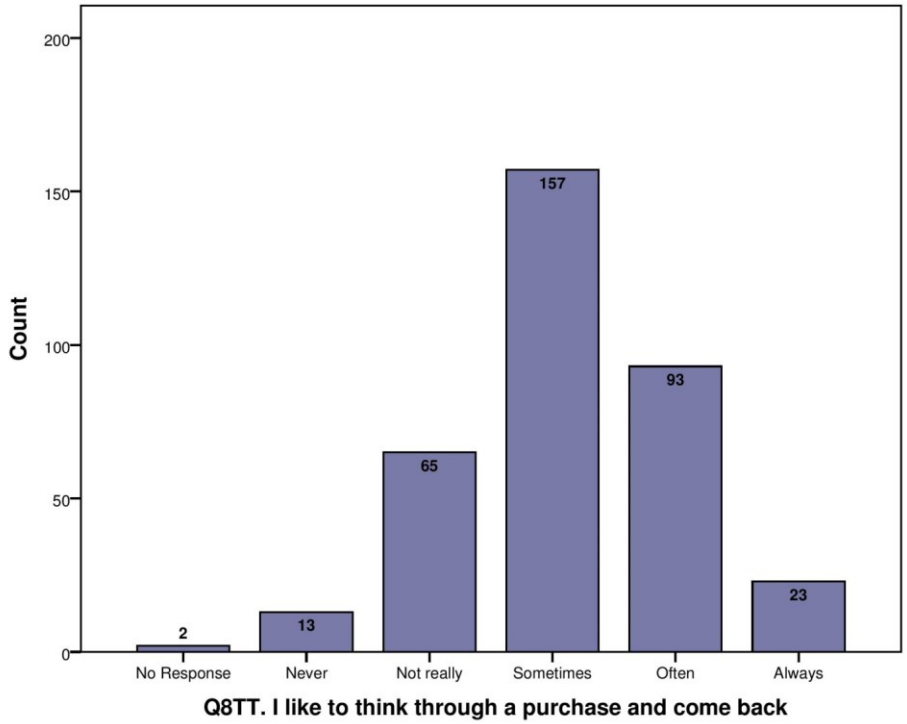


Figure 228. Q8TT. I like to think through a purchase and come back

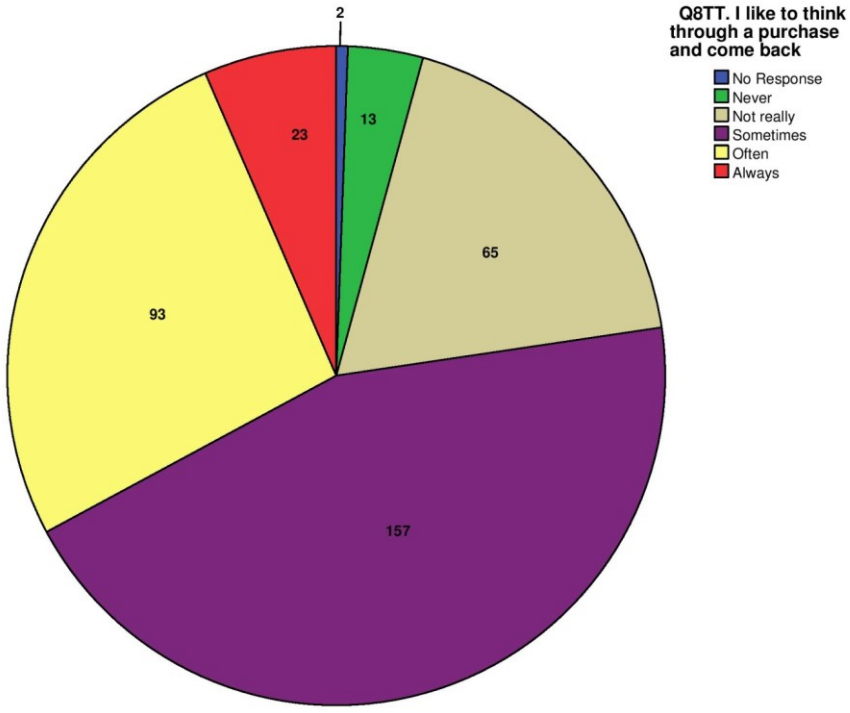


Figure 229. Q8TT. I like to think through a purchase and come back

Q16. How would you describe your own personal style?

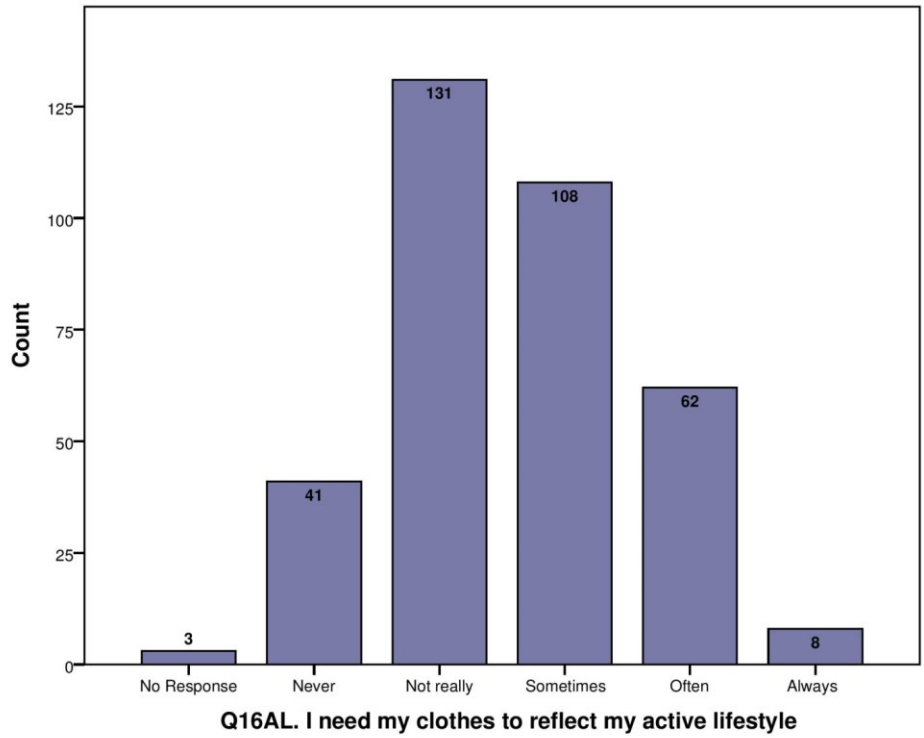


Figure 230. Q16AL. I need my clothes to reflect my active lifestyle

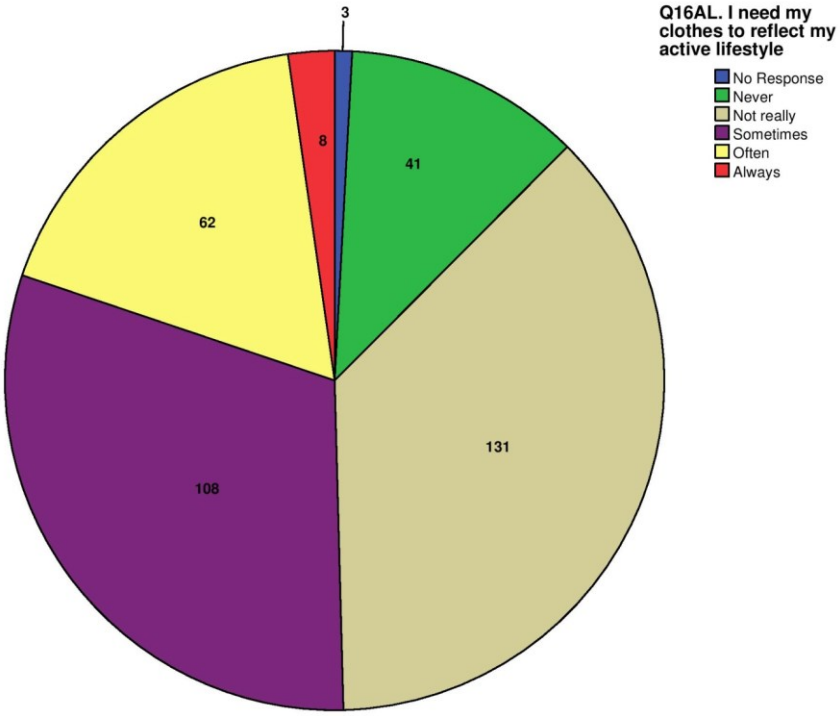


Figure 231. Q16AL. I need my clothes to reflect my active lifestyle

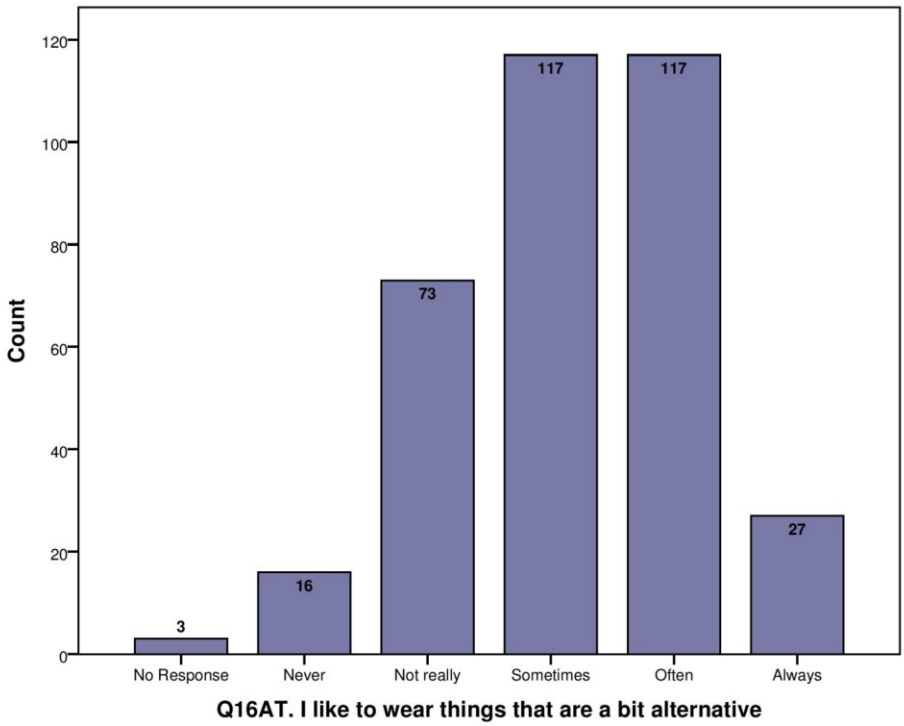


Figure 232. Q16AT I like to wear things that are a bit alternative

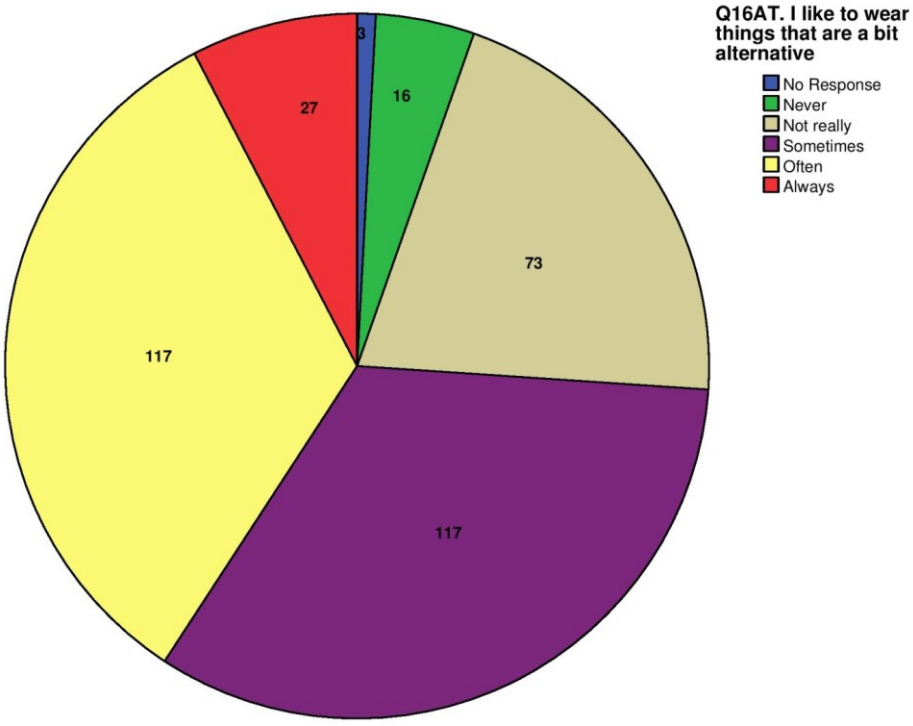


Figure 233. Q16AT I like to wear things that are a bit alternative

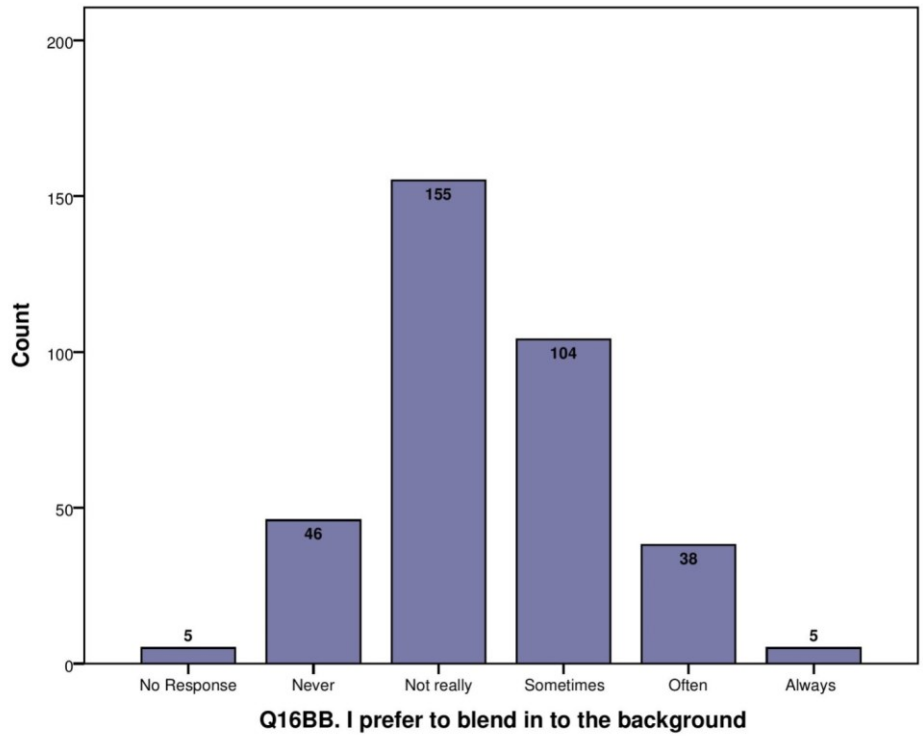


Figure 234. Q16BB. I prefer to blend into the background

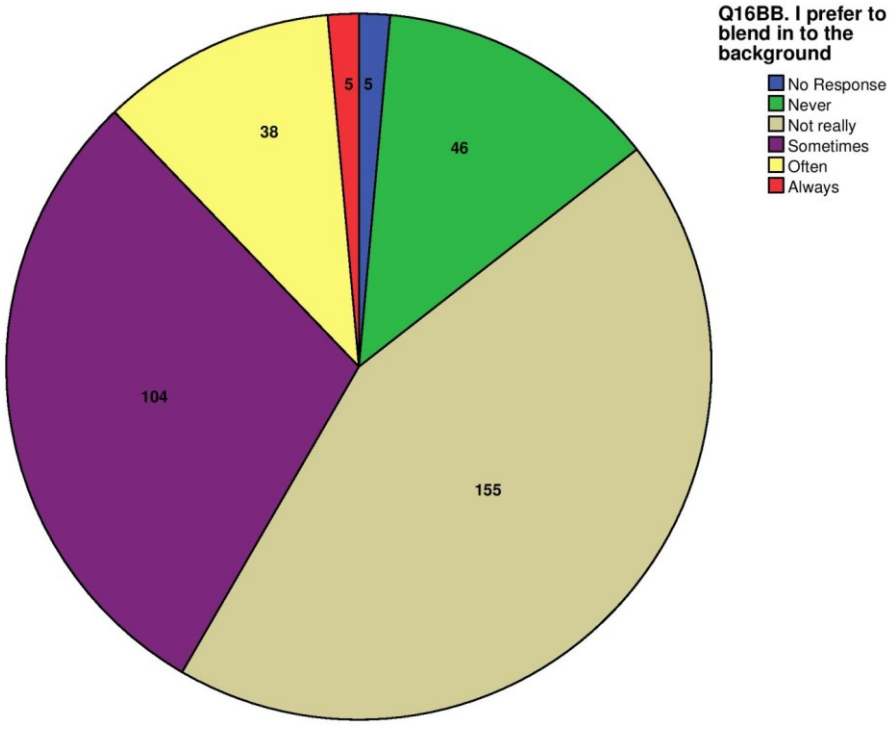


Figure 235. Q16BB. I prefer to blend into the background

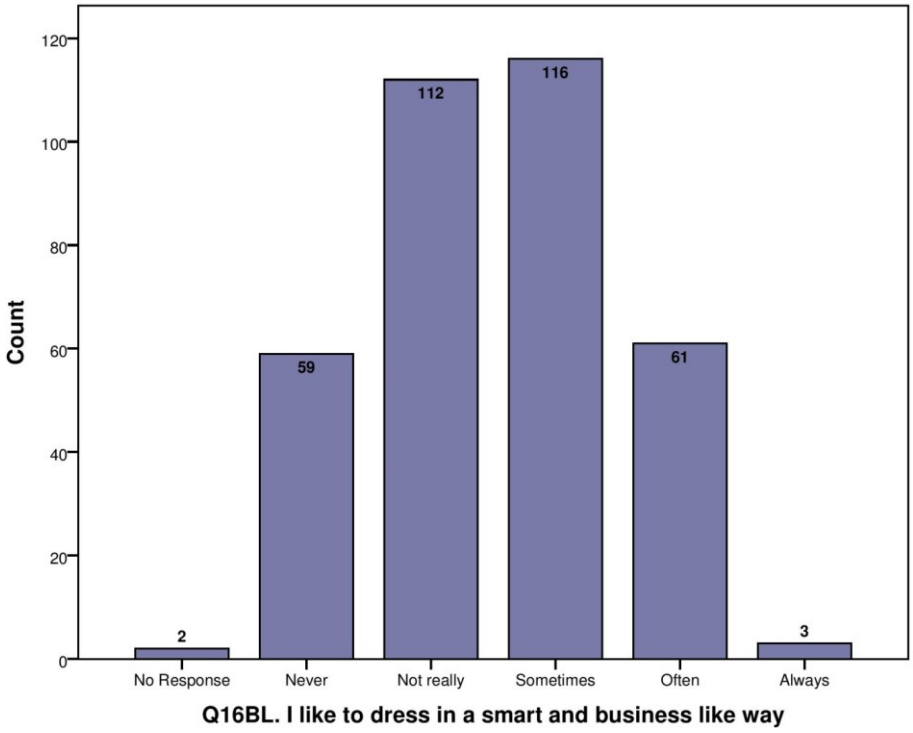


Figure 236. Q16BL. I like to dress in a smart and business like way

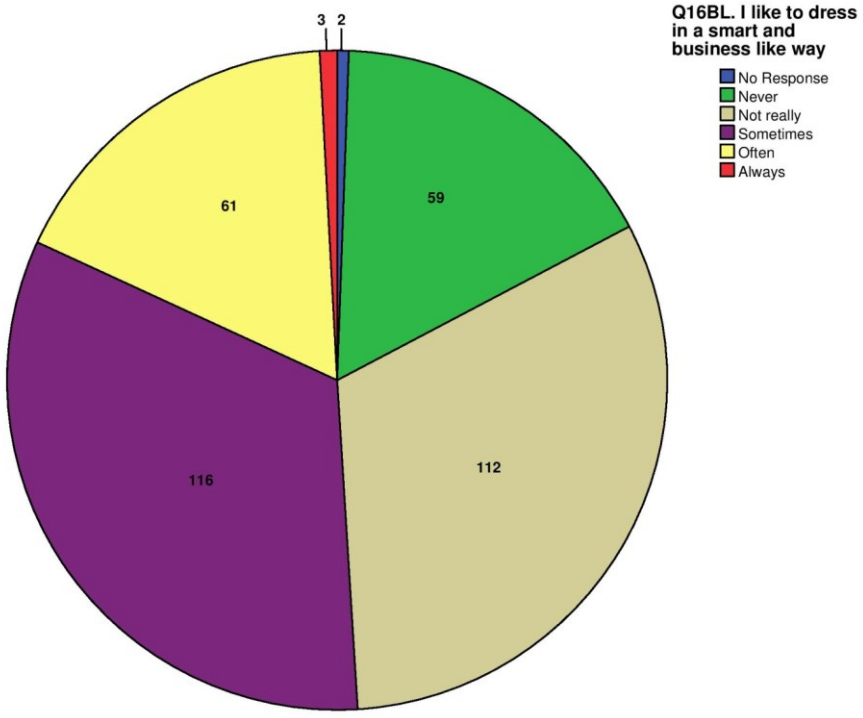


Figure 237. I like to dress in a smart and business like way

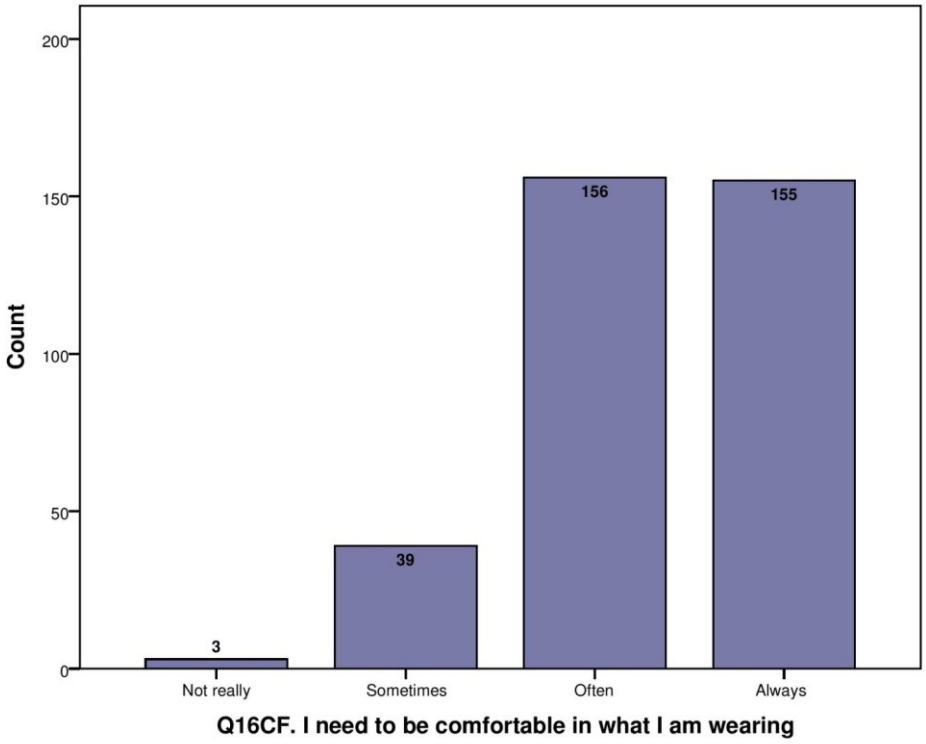


Figure 238. Q16CF. I need to be comfortable in what I am wearing

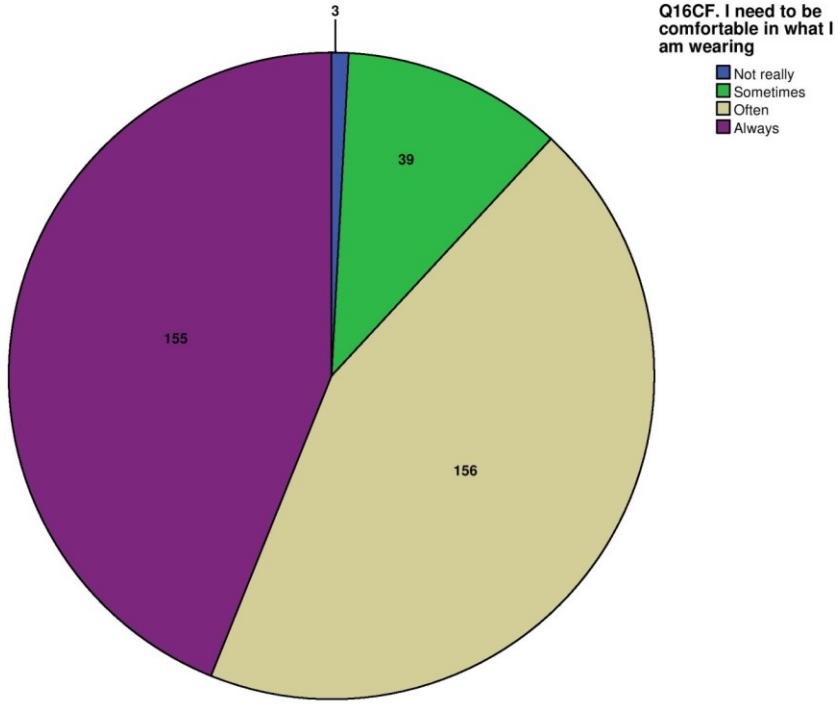


Figure 239. Q16CF. I need to be comfortable in what I am wearing

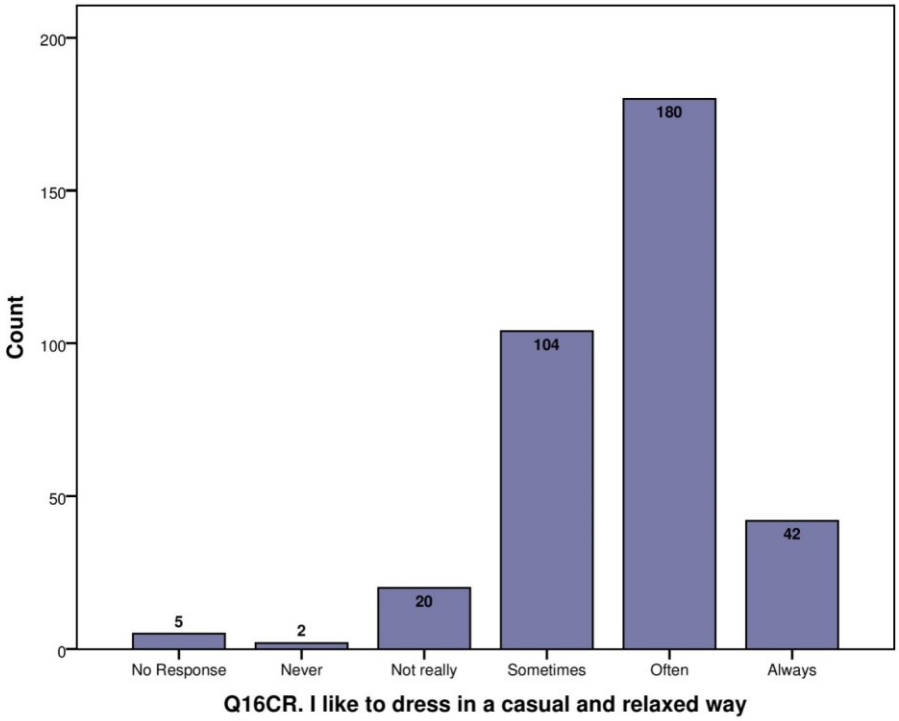


Figure 240. Q16CR. I like to dress in a casual and relaxed way

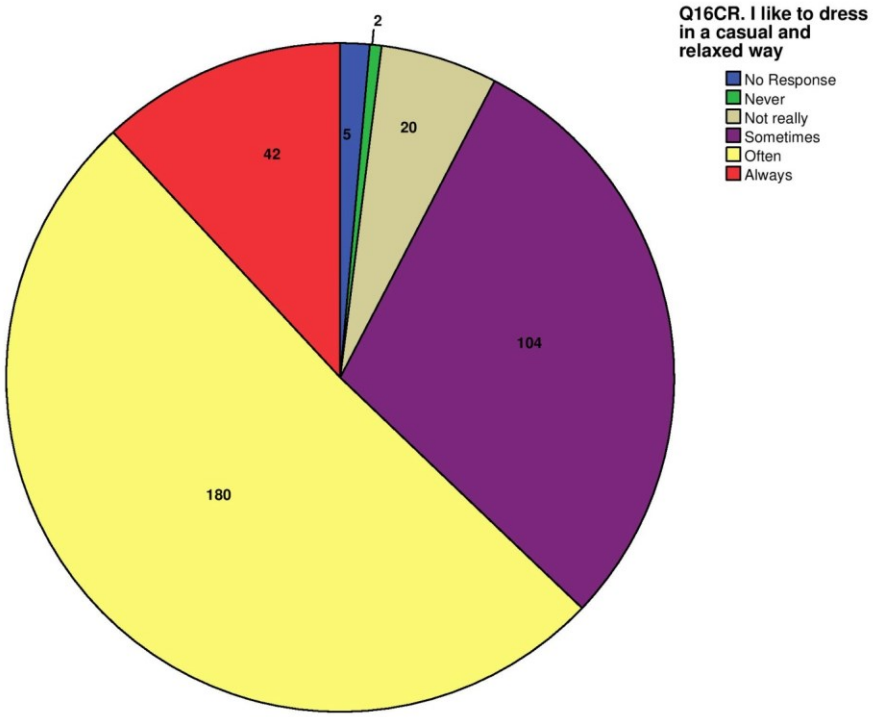


Figure 241. Q16CR. I like to dress in a casual and relaxed way

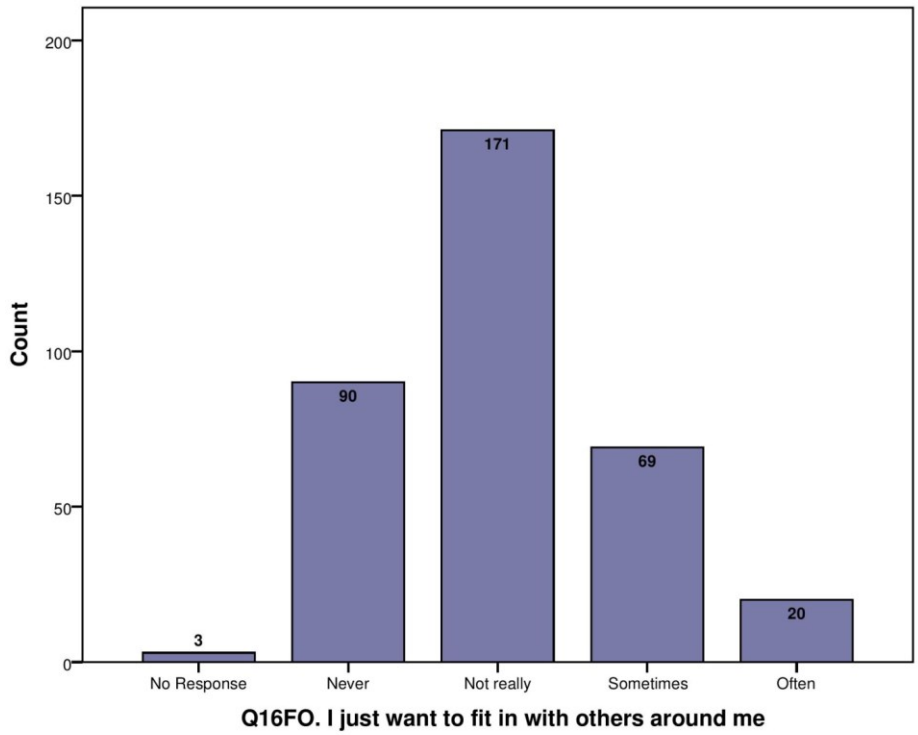


Figure 242. Q16FO. I just want to fit in with others around me

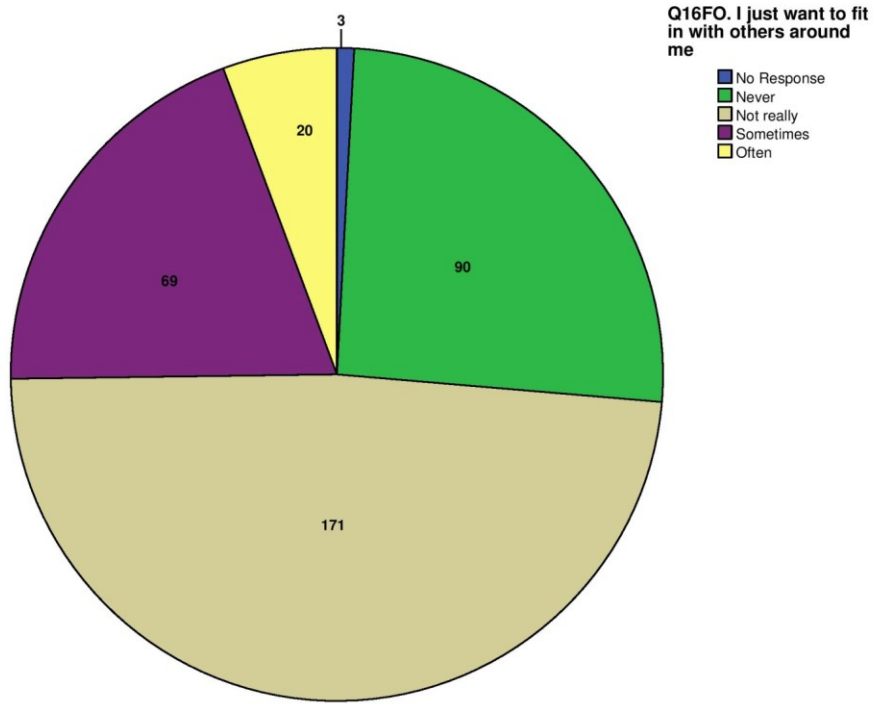


Figure 243. Q16FO. I just want to fit in with others around me

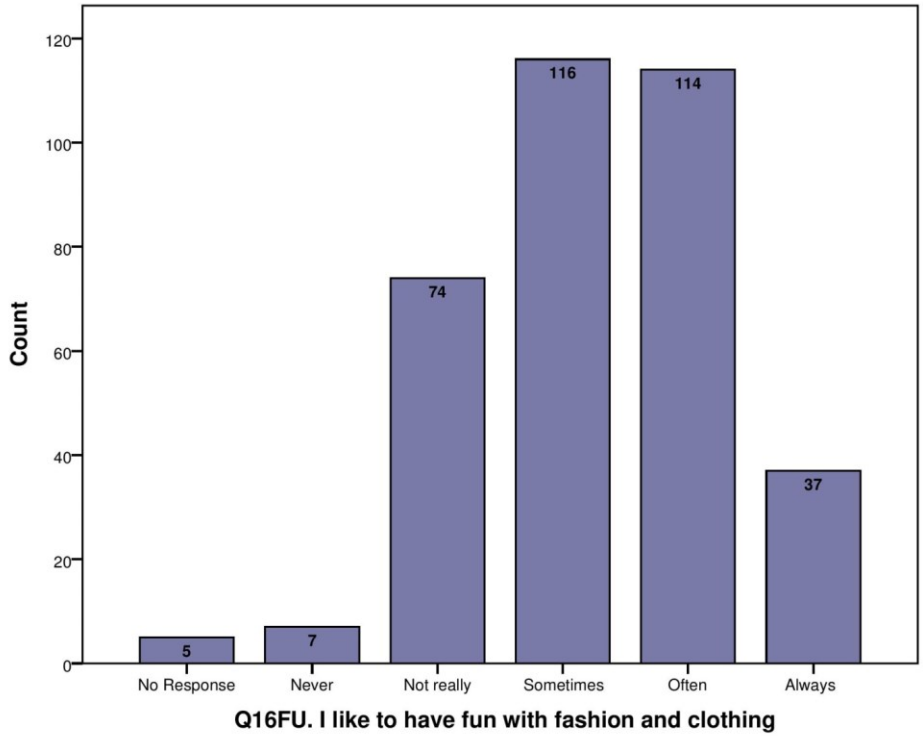


Figure 244. Q16FU. I like to have fun with fashion and clothing

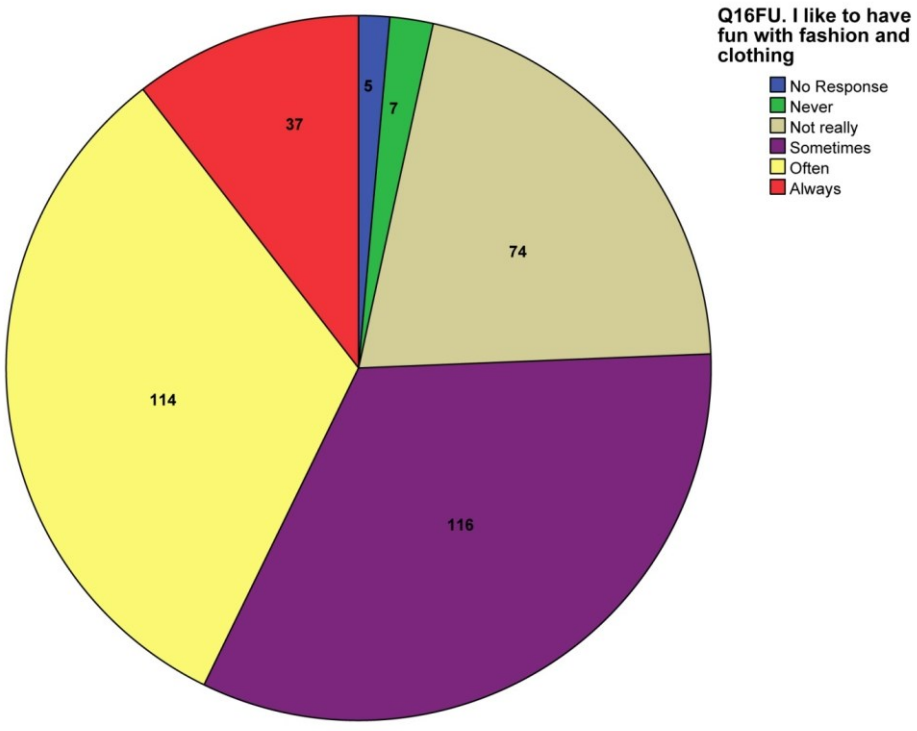


Figure 245. Q16FU. I like to have fun with fashion and clothing

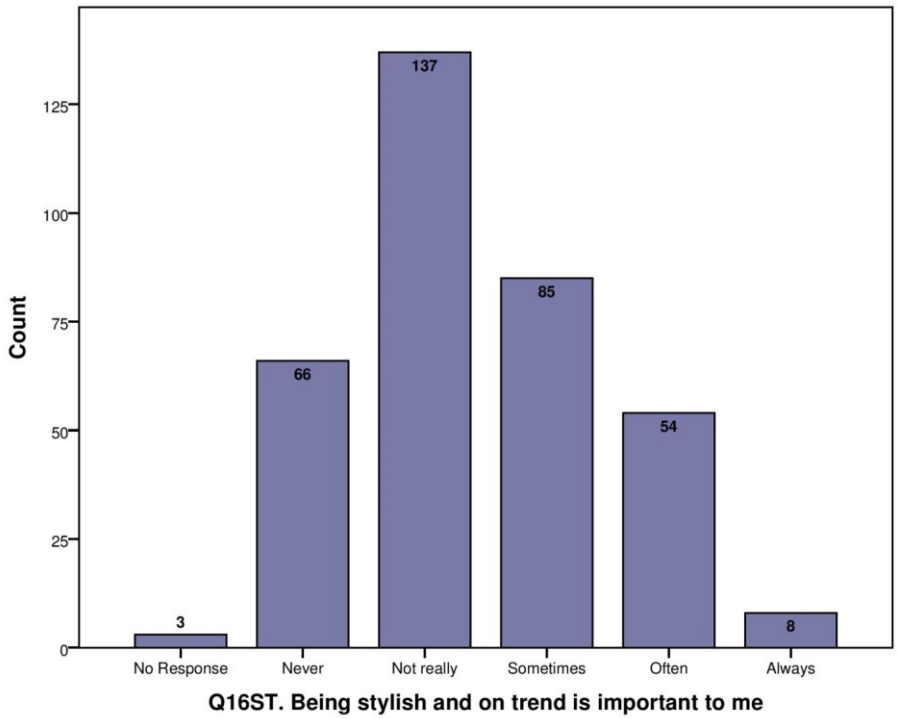


Figure 246. Q16ST. Being stylish and on trend is important to me

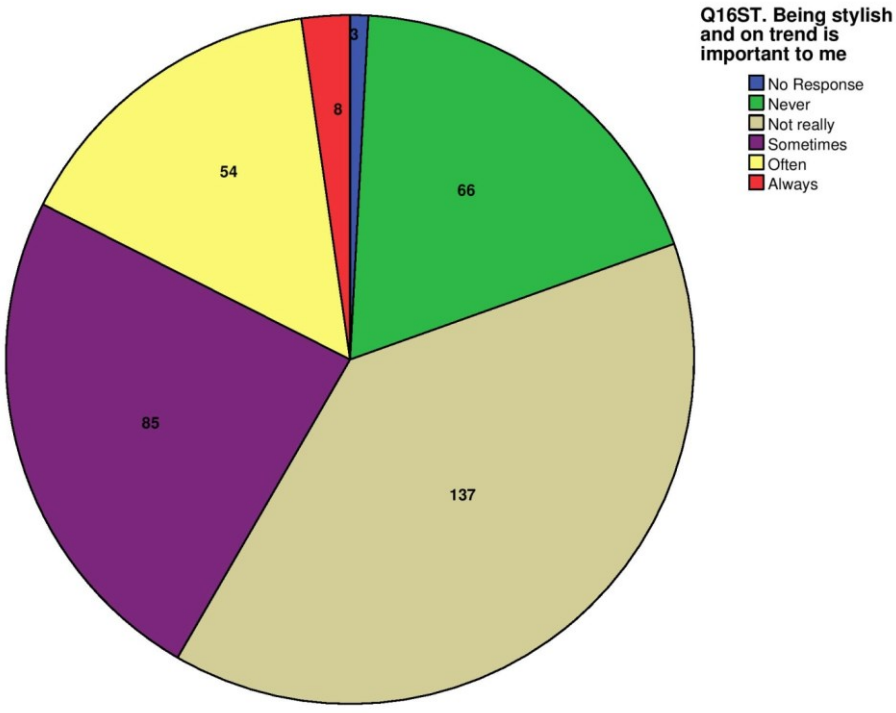


Figure 247. Q16ST. Being stylish and on trend is important to me

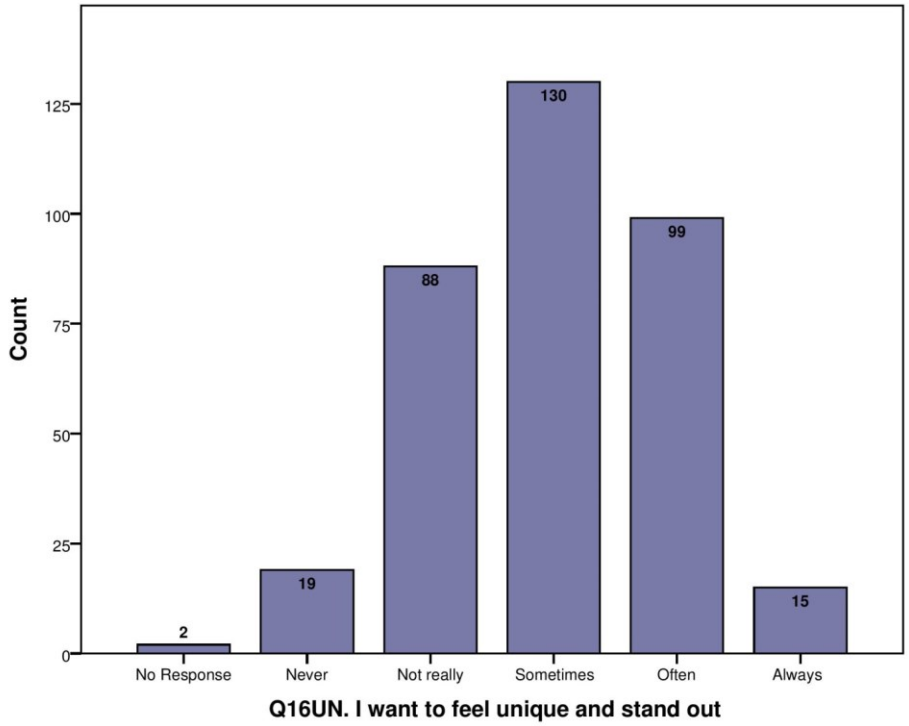


Figure 248. Q16UN. I want to feel unique and stand out

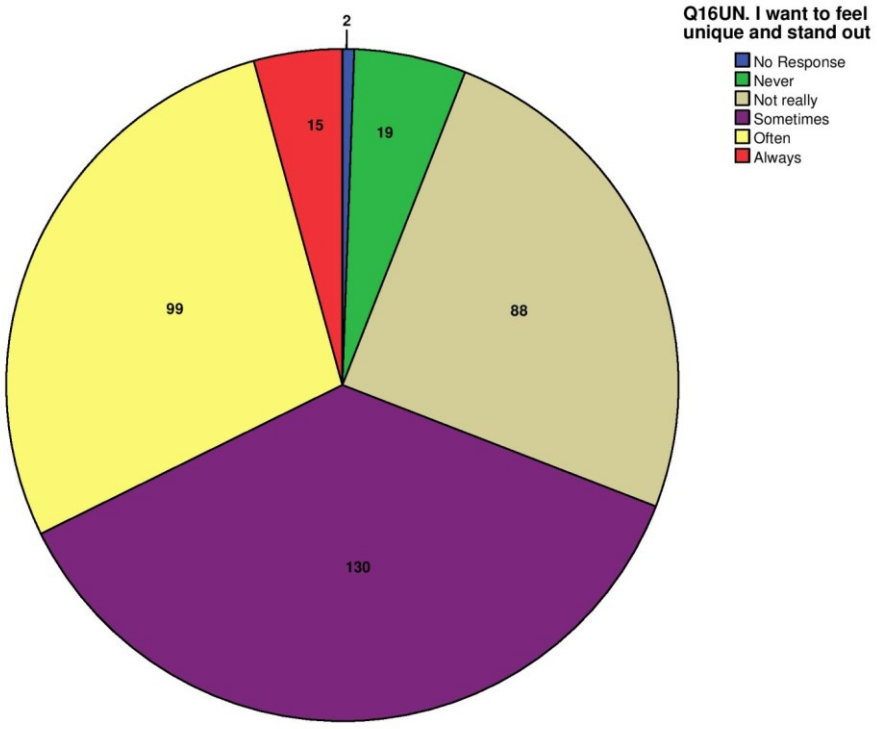


Figure 249. Q16UN. I want to feel unique and stand out

Q17. Would you describe yourself as any of the following?

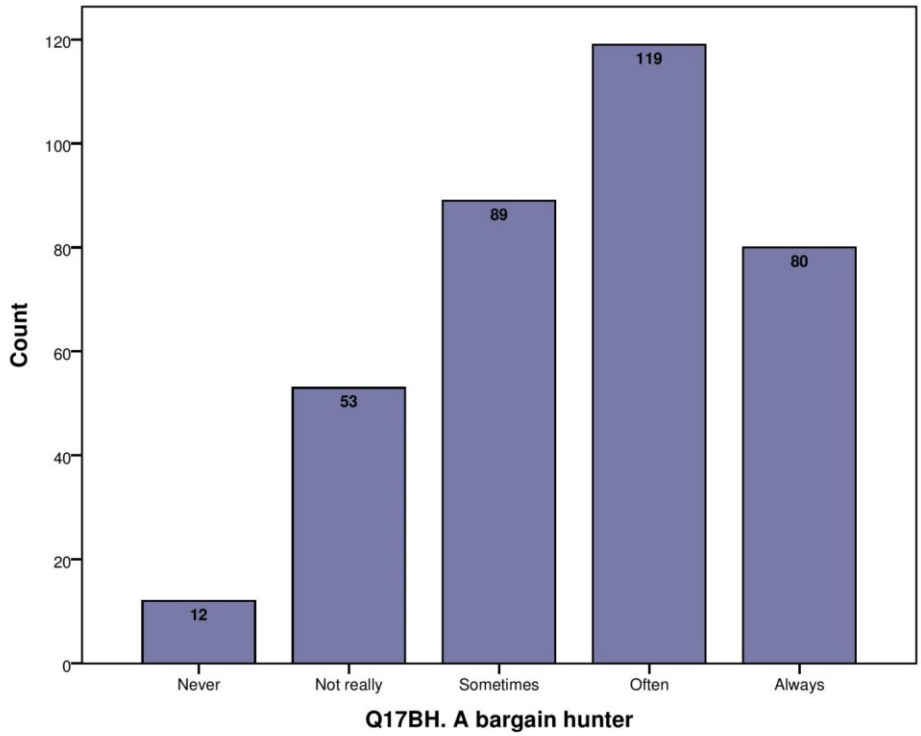


Figure 250. Q17BH. A bargain hunter

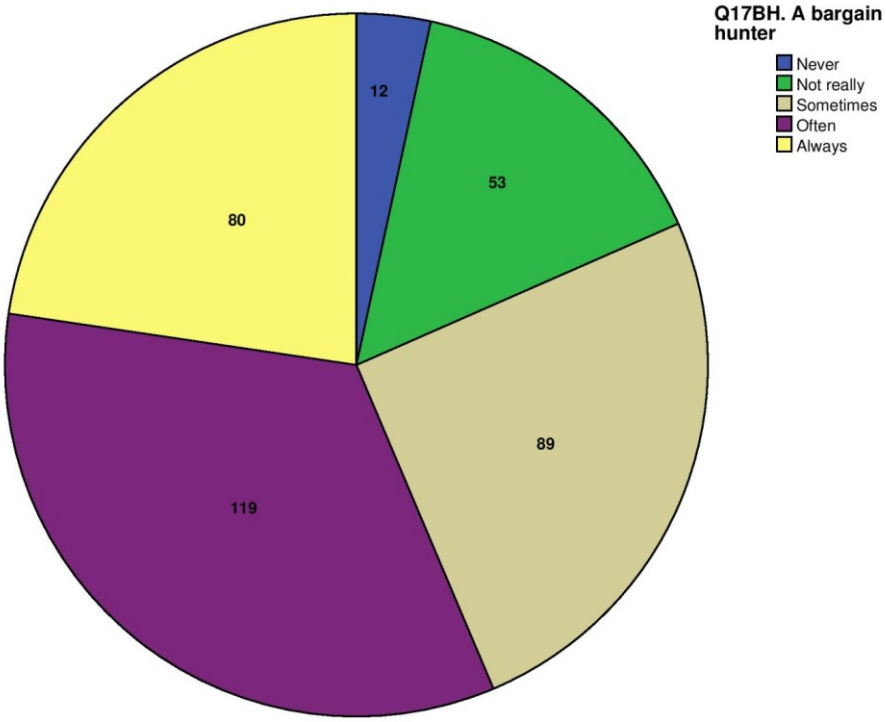


Figure 251. Q17BH. A bargain hunter

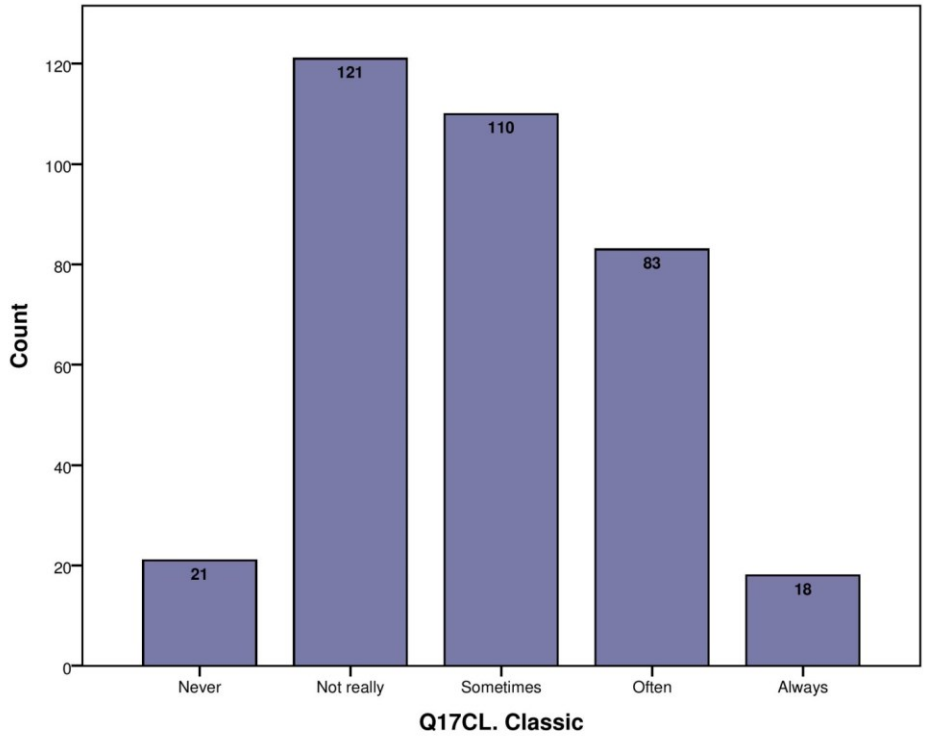


Figure 252. Q17CL. Classic

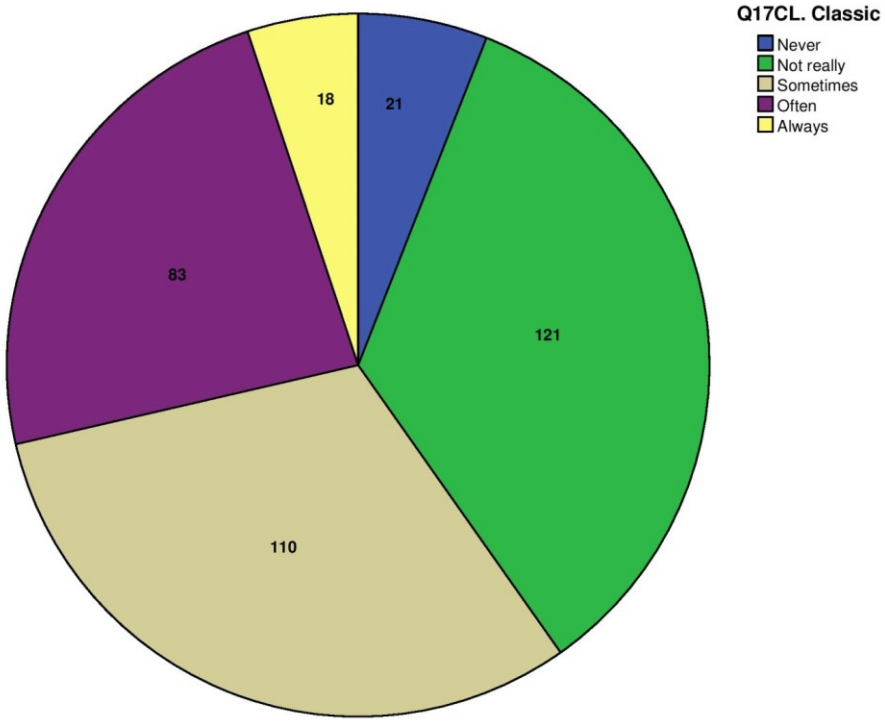


Figure 253. Q17CL. Classic

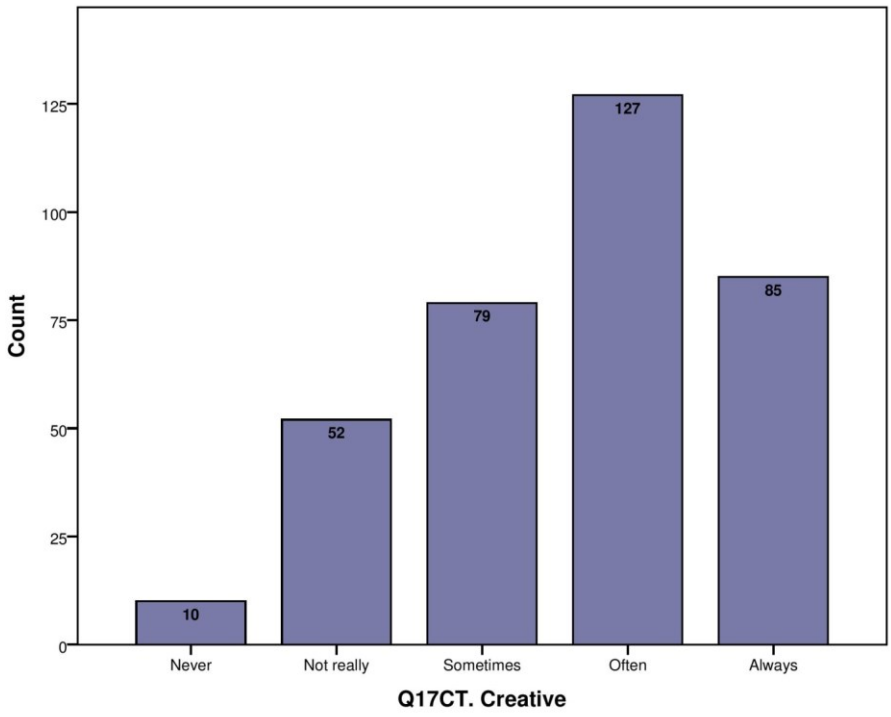


Figure 254. Q17CT. Creative

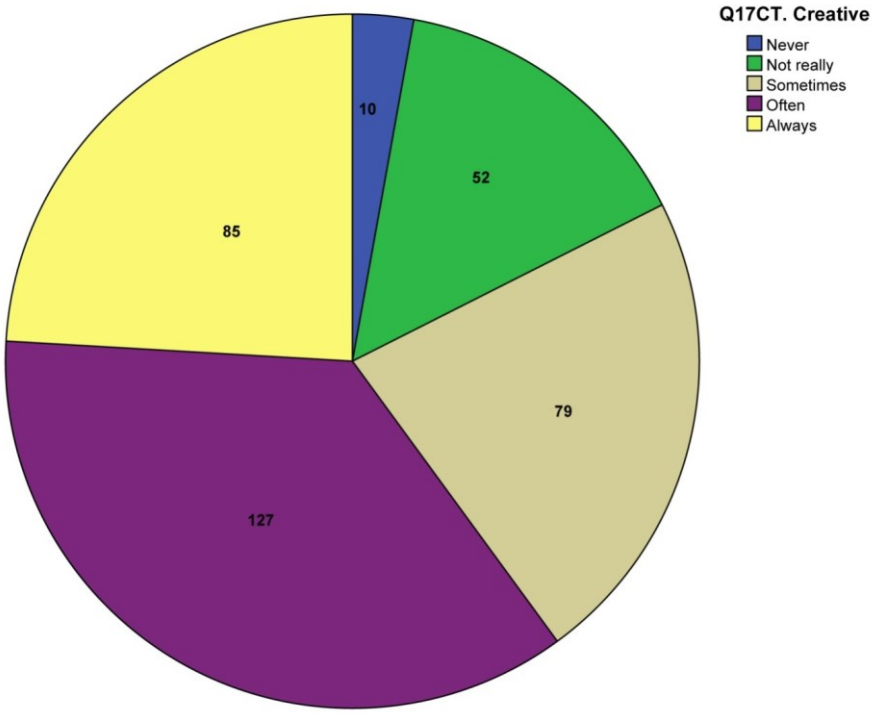


Figure 255. Q17CT. Creative

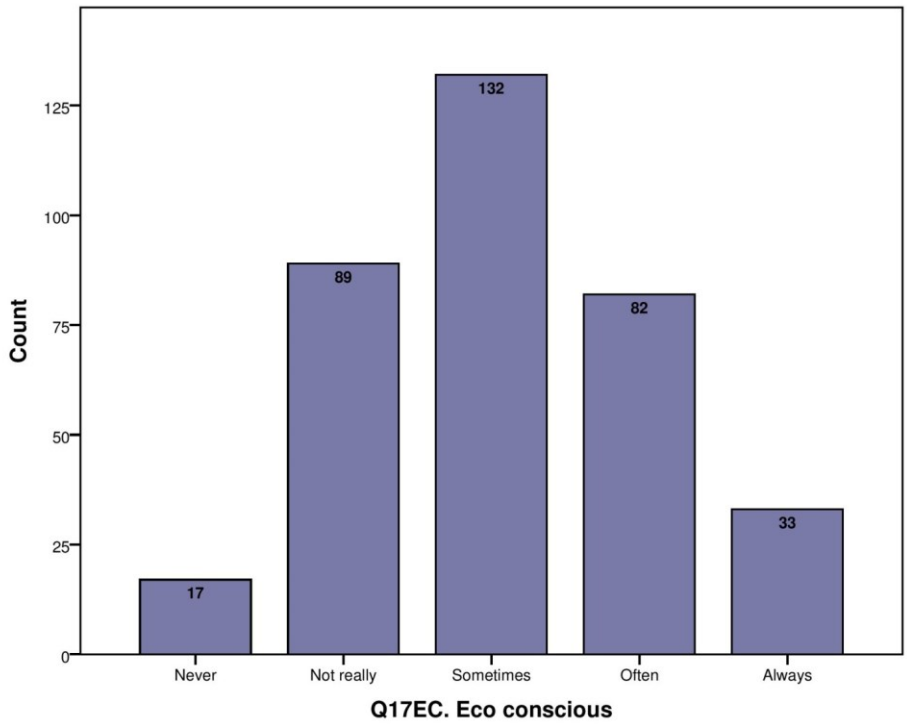


Figure 256. Q17EC. Eco conscious

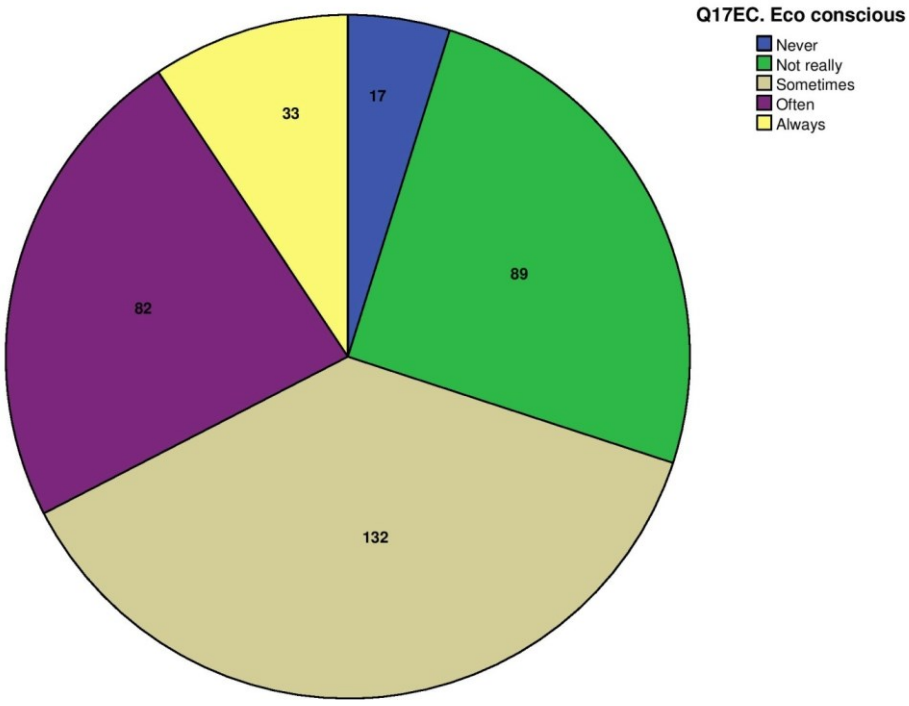


Figure 257. Q17EC. Eco conscious

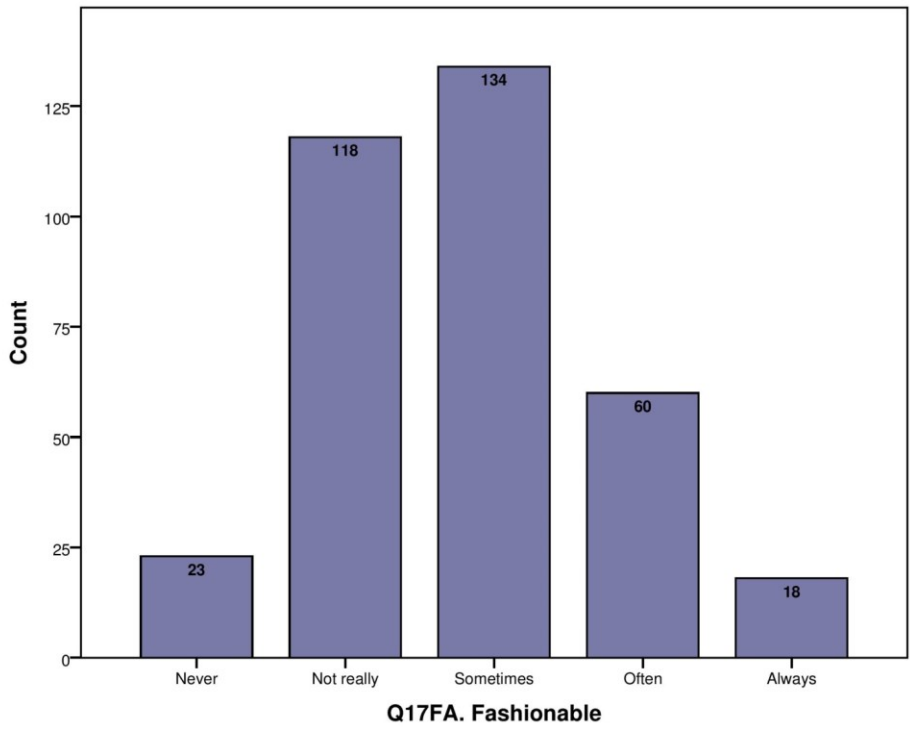


Figure 258. Q17FA. Fashionable

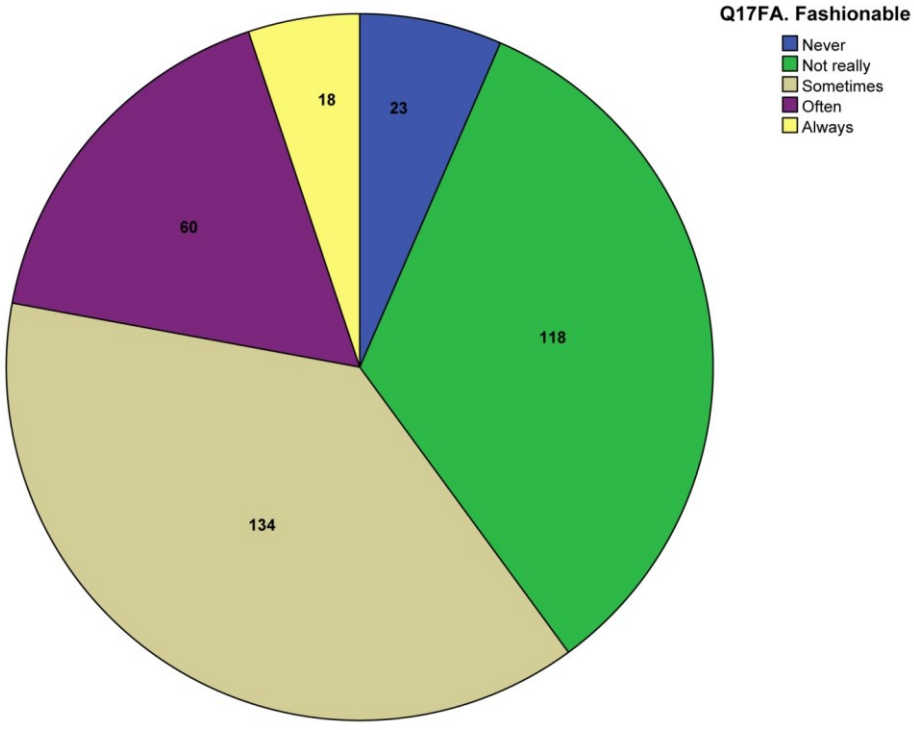


Figure 259. Q17FA. Fashionable

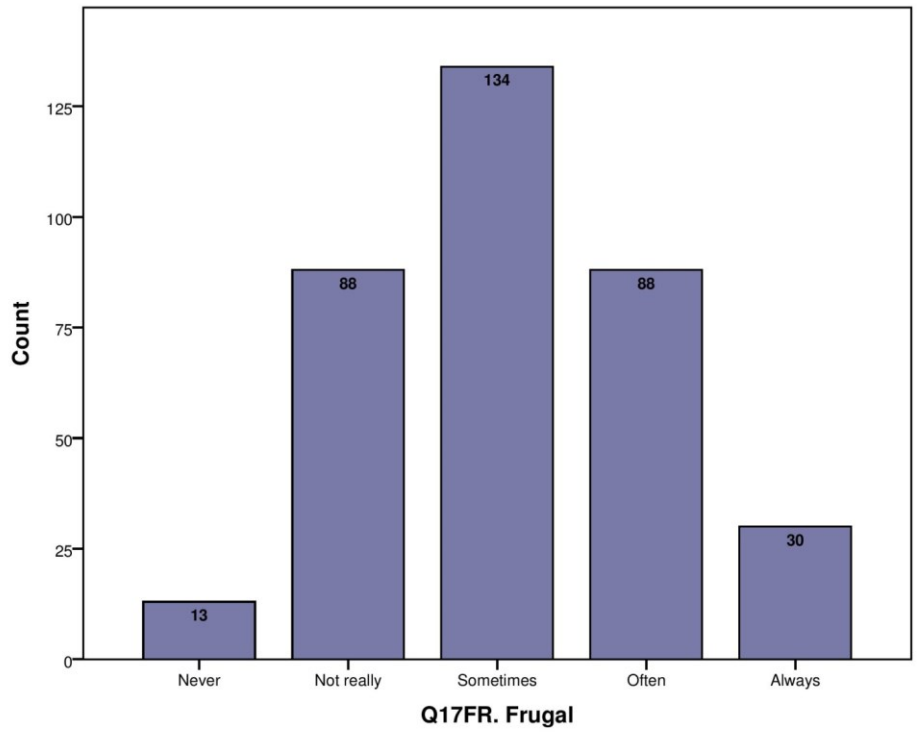


Figure 260. Q17FR. Frugal

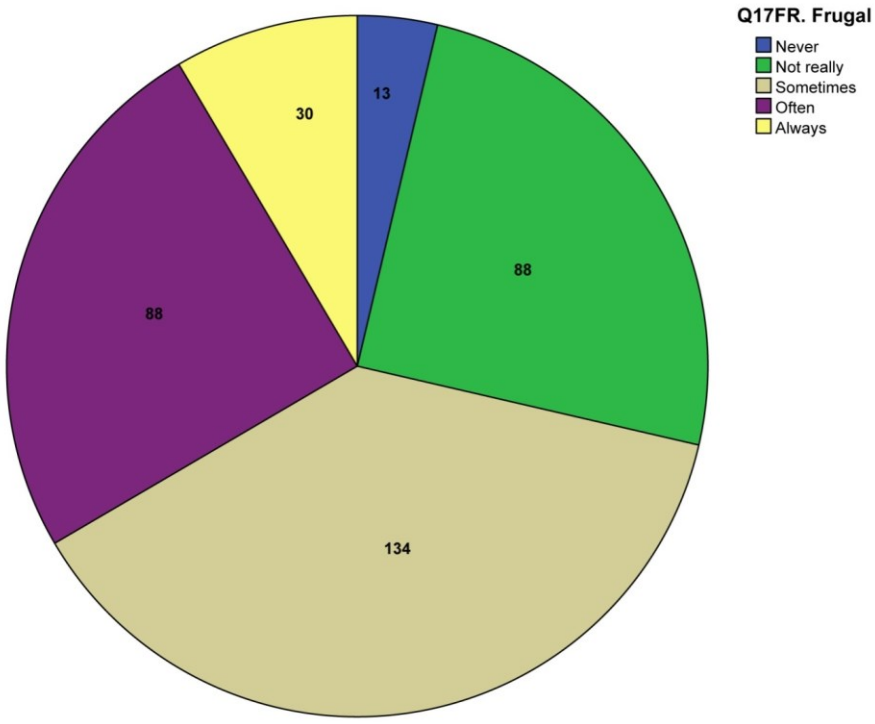


Figure 261. Q17FR. Frugal

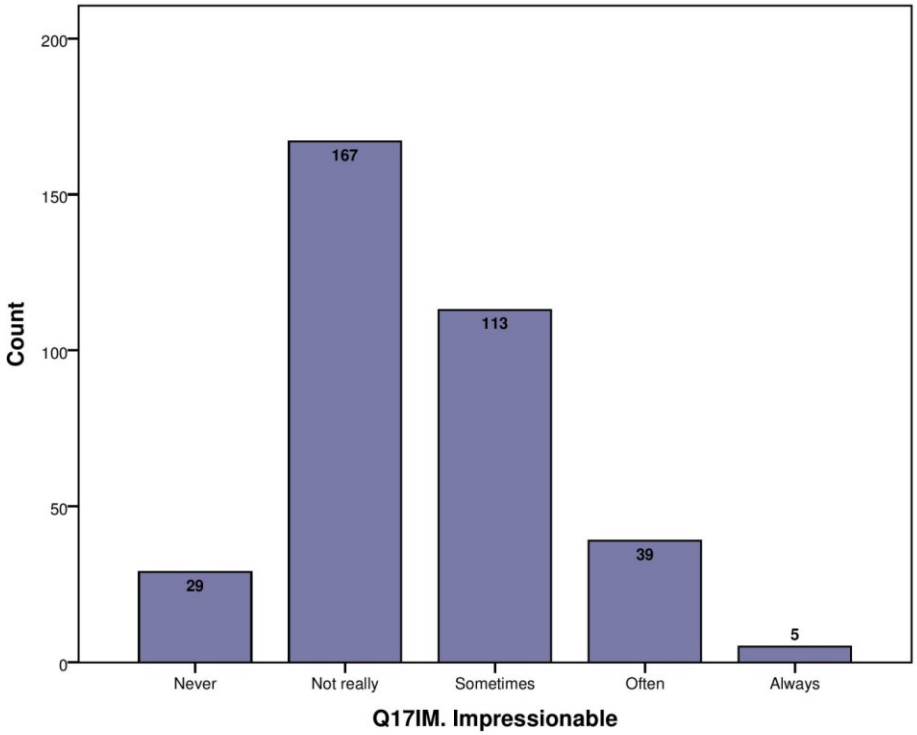


Figure 262. Q17IM. Impressionable

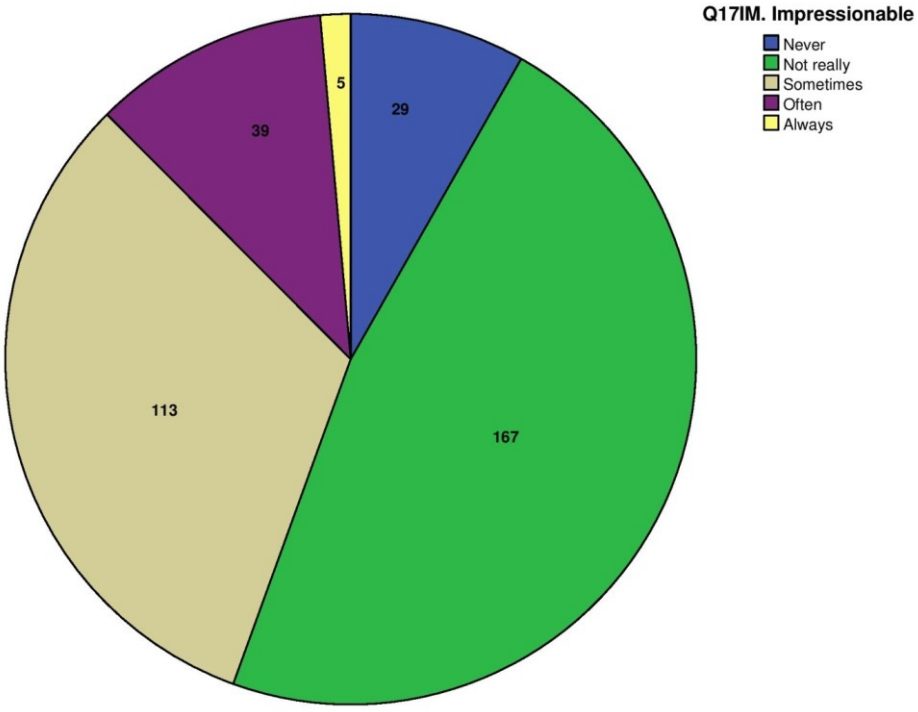


Figure 263. Q17IM. Impressionable

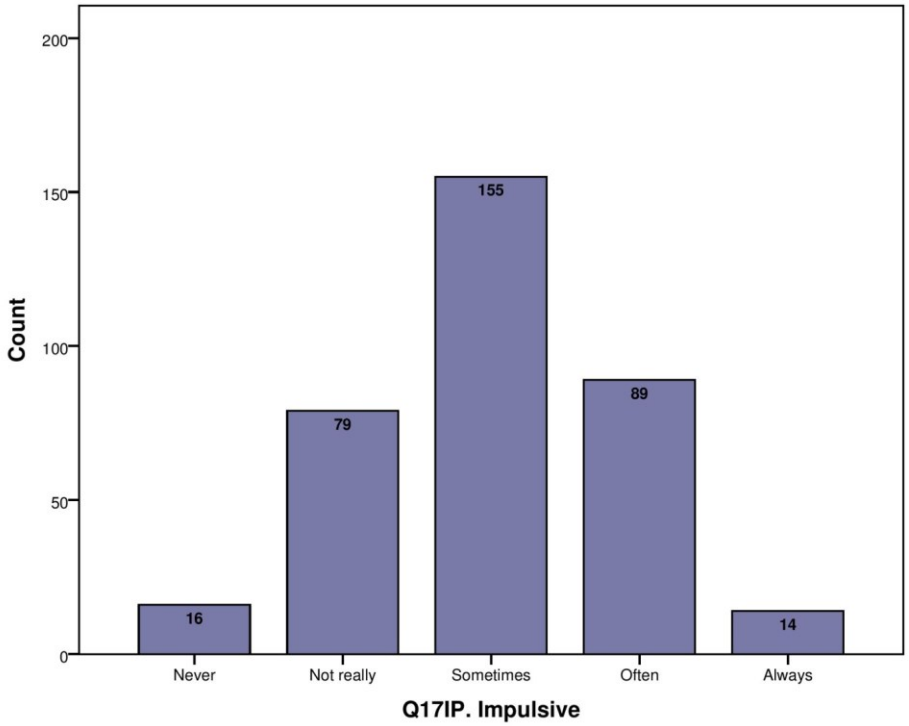


Figure 264. Q17IP. Impulsive

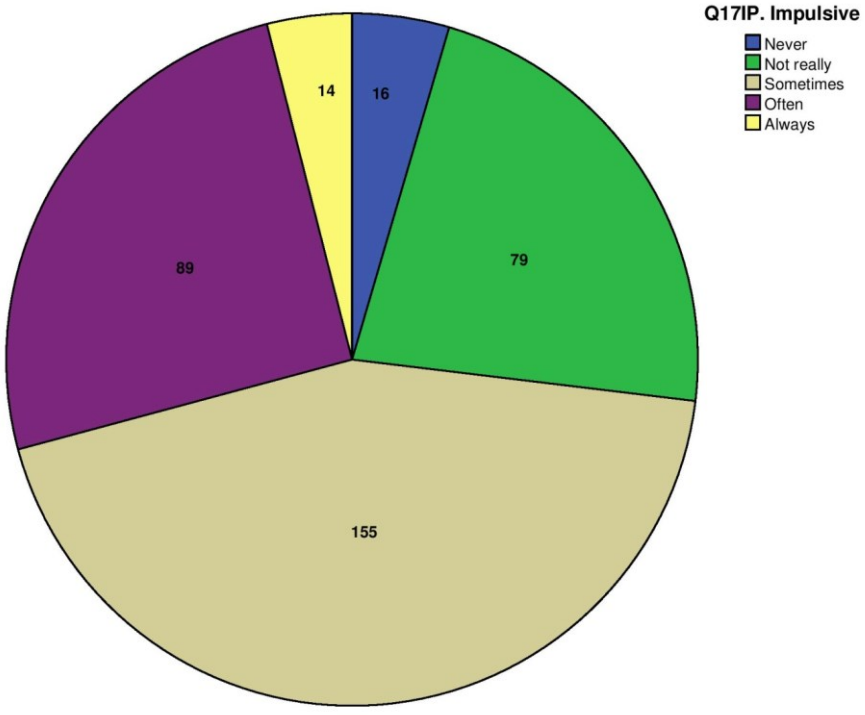


Figure 265. Q17IP. Impulsive

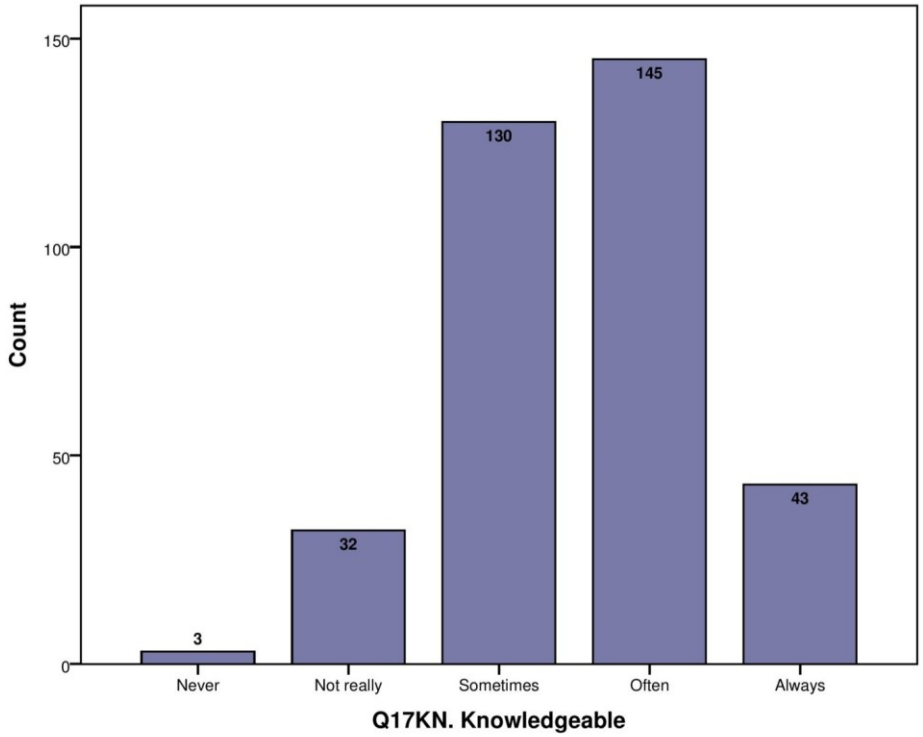


Figure 266. Q17KN. Knowledgeable

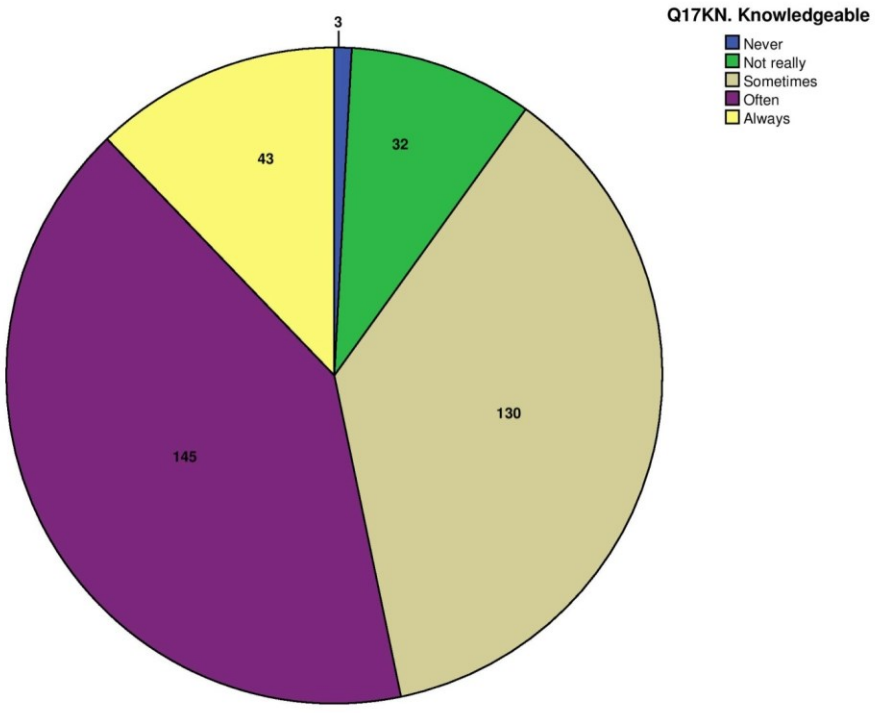


Figure 267. Q17KN. Knowledgeable

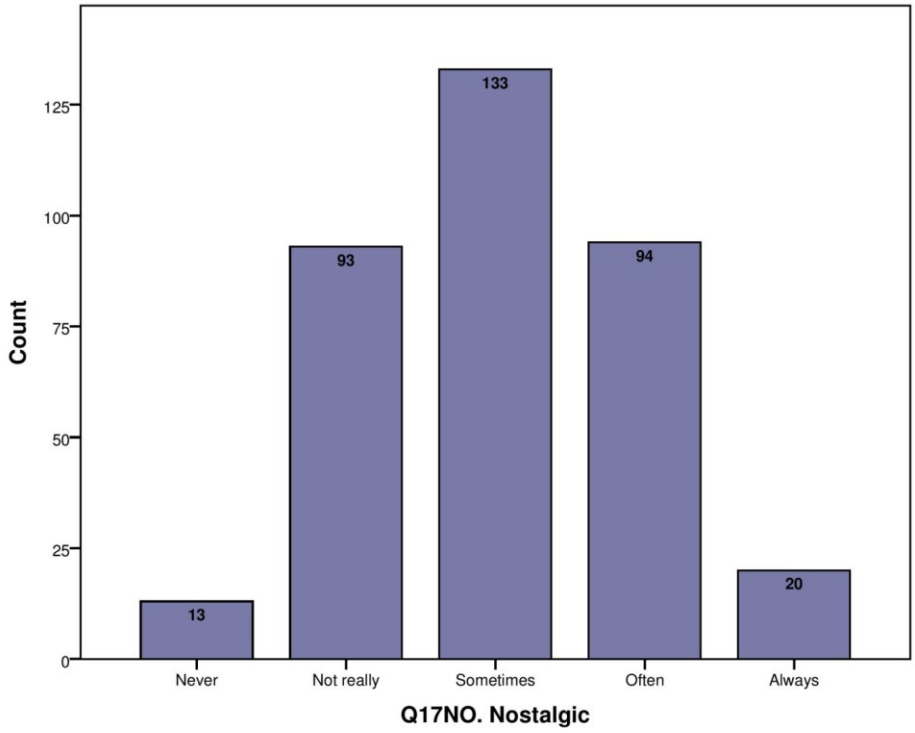


Figure 268. Q17NO. Nostalgic

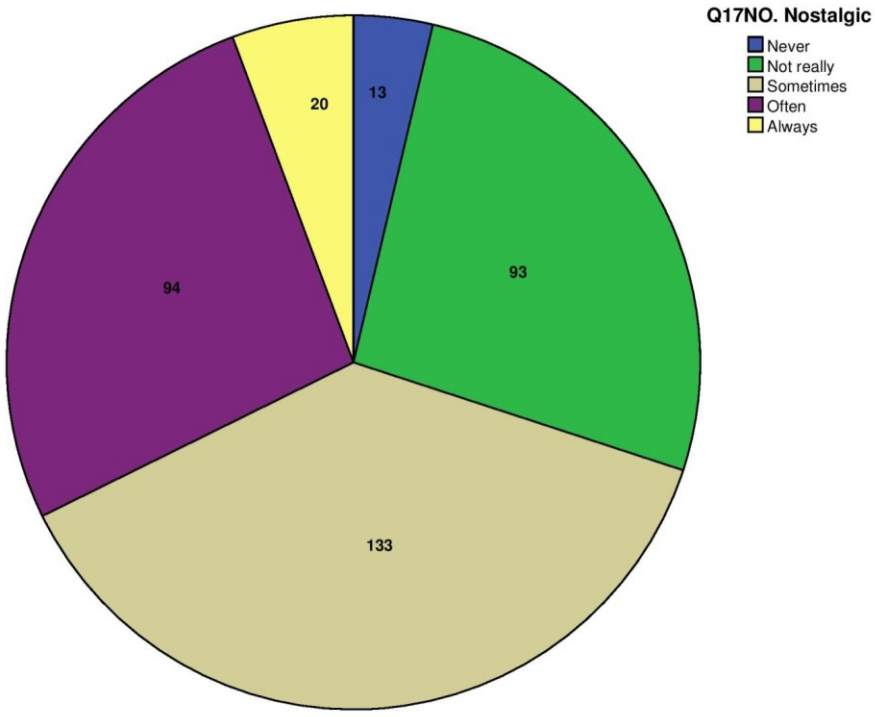


Figure 269. Q17NO. Nostalgic

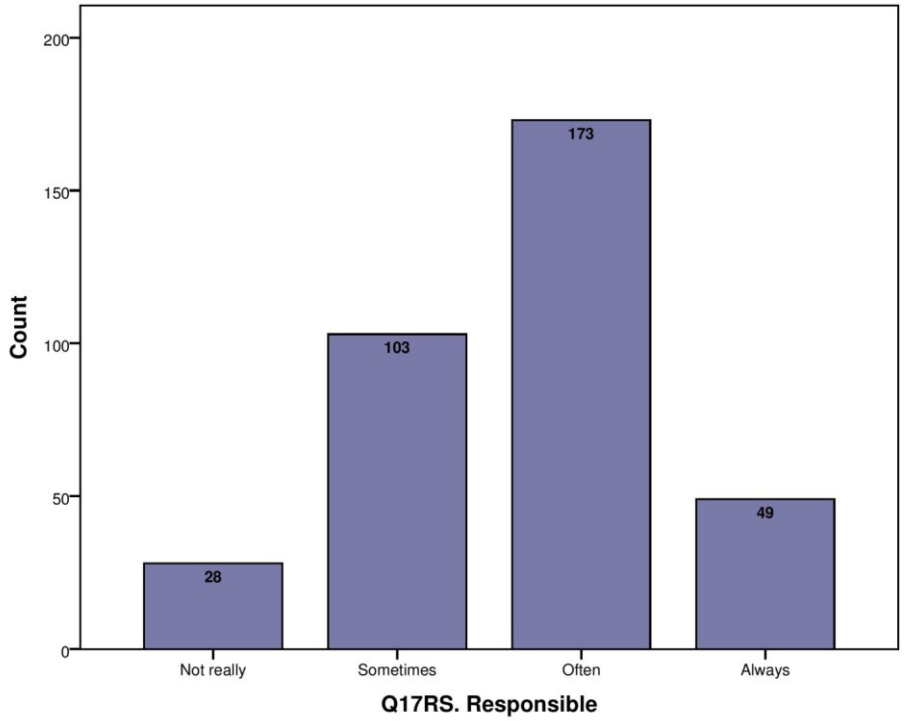


Figure 270. Q17RS. Responsible

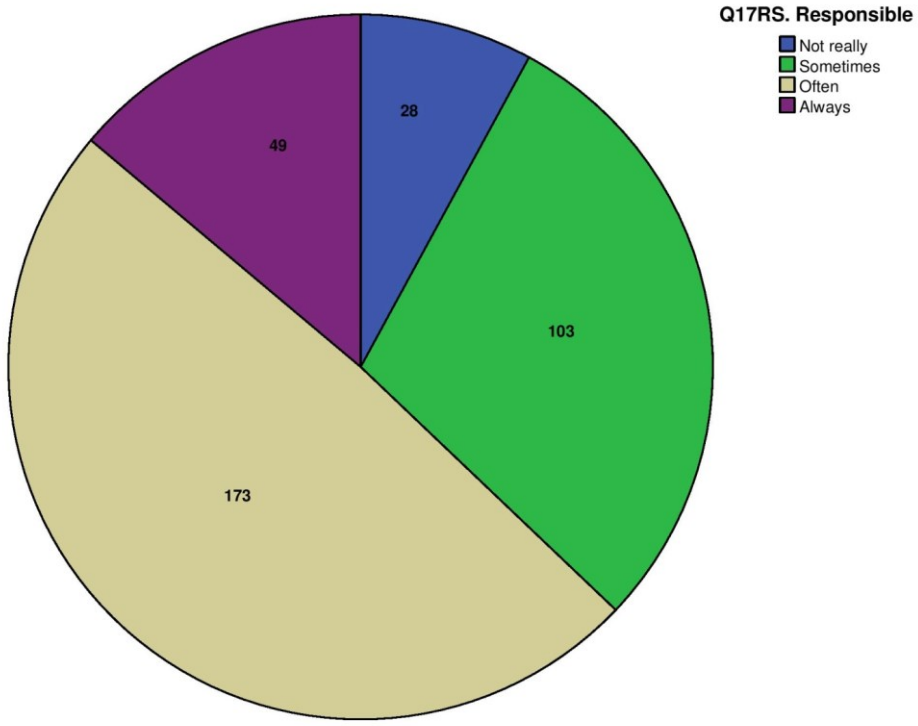


Figure 271. Q17RS. Responsible

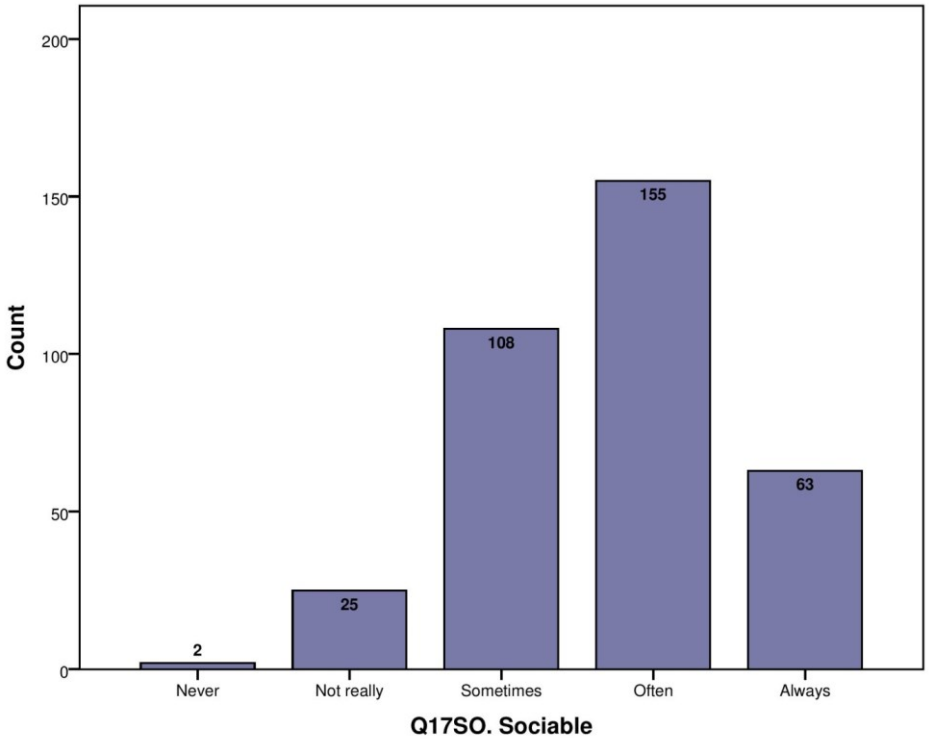


Figure 272. Q17SO. Sociable

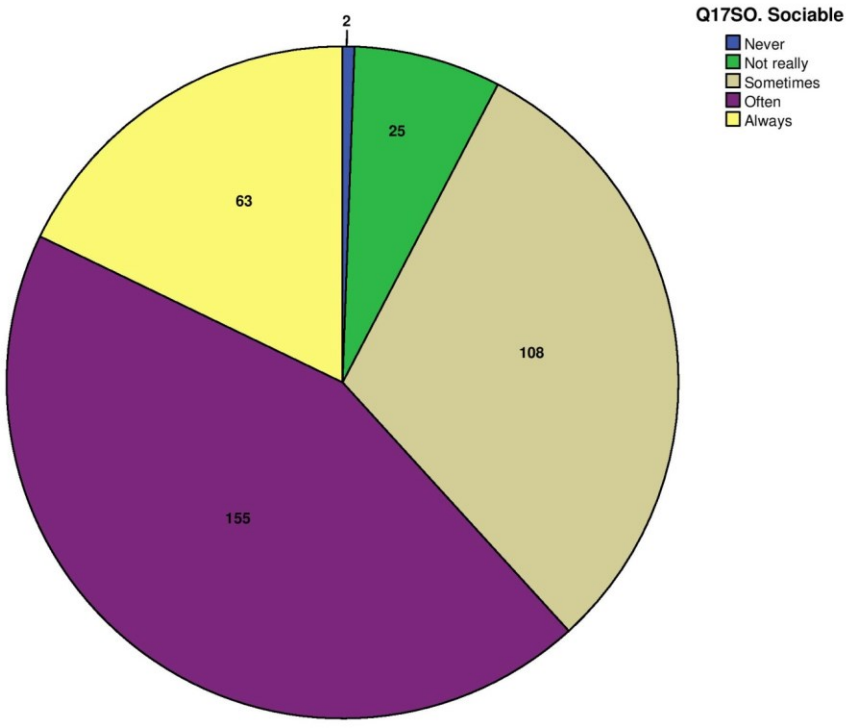


Figure 273. Q17SO. Sociable

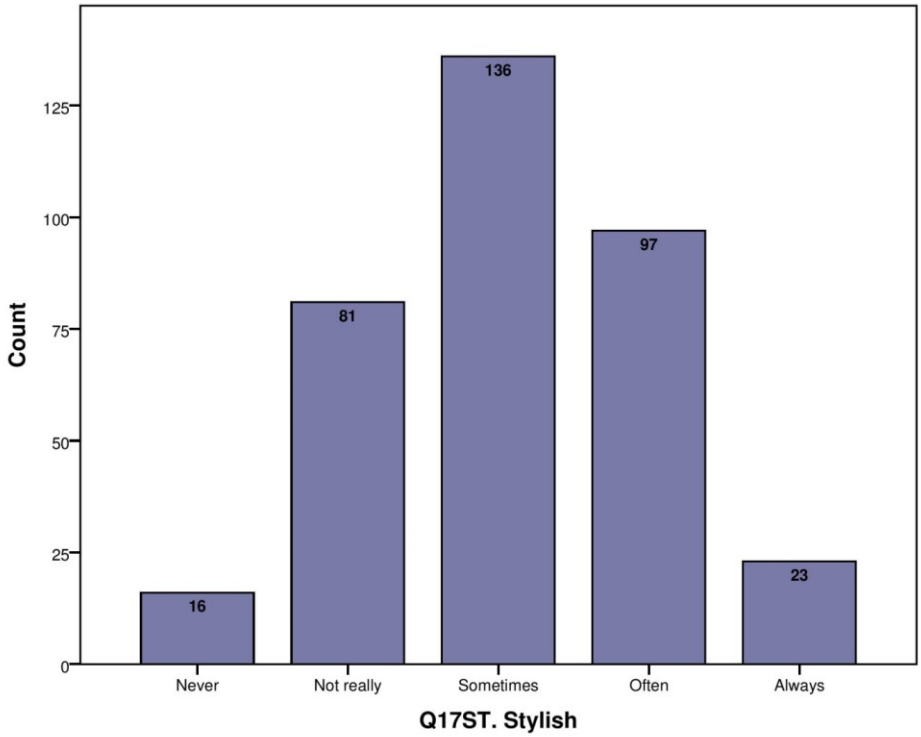


Figure 274. Q17ST. Stylish

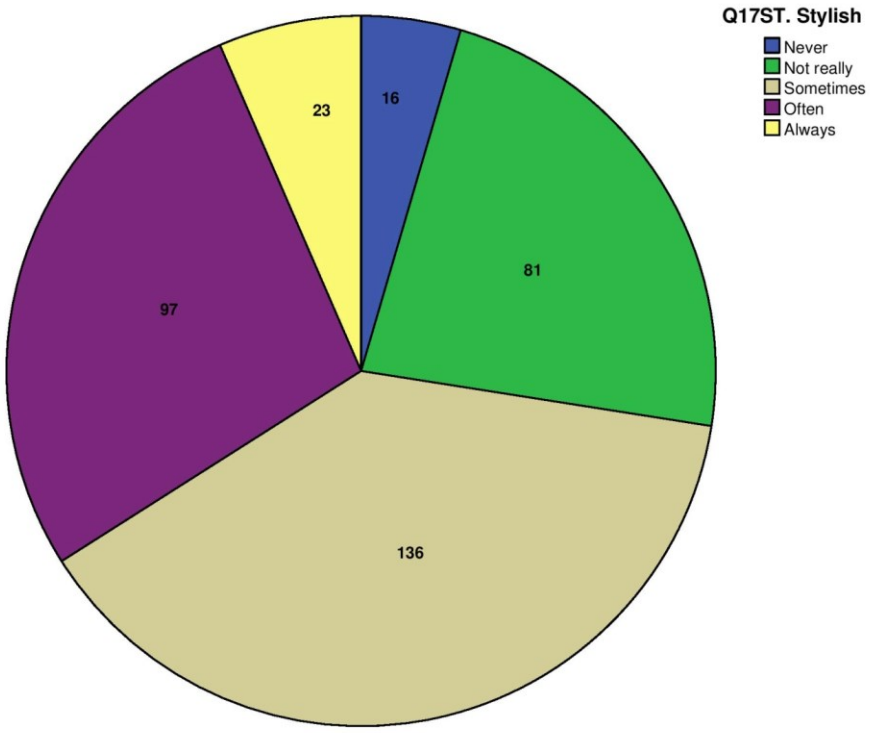


Figure 275. Q17ST. Stylish

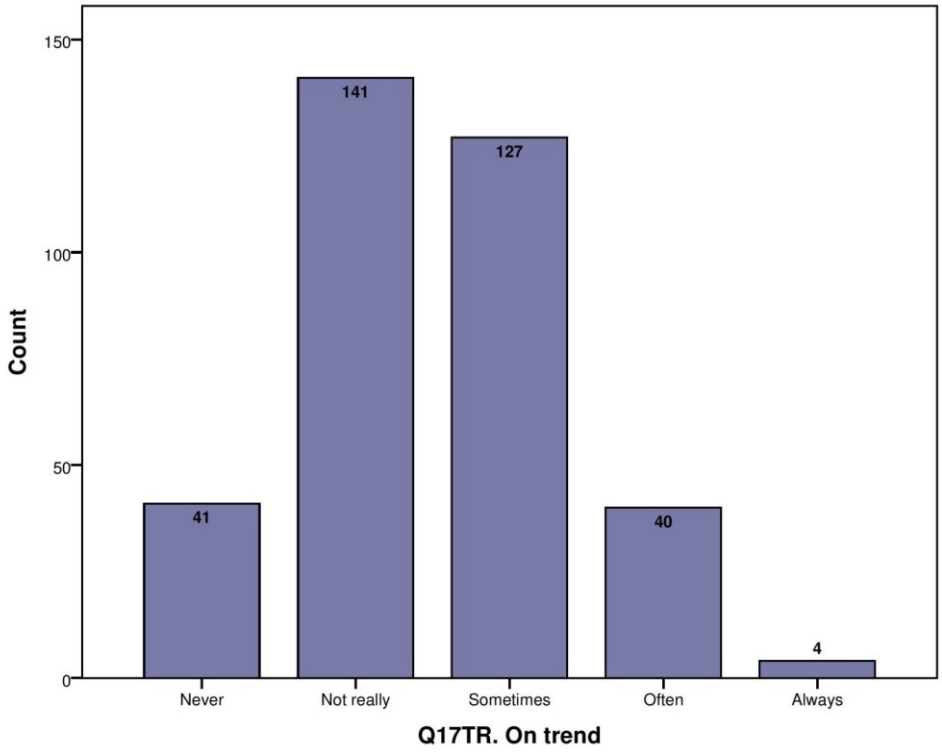


Figure 276. Q17TR. On trend

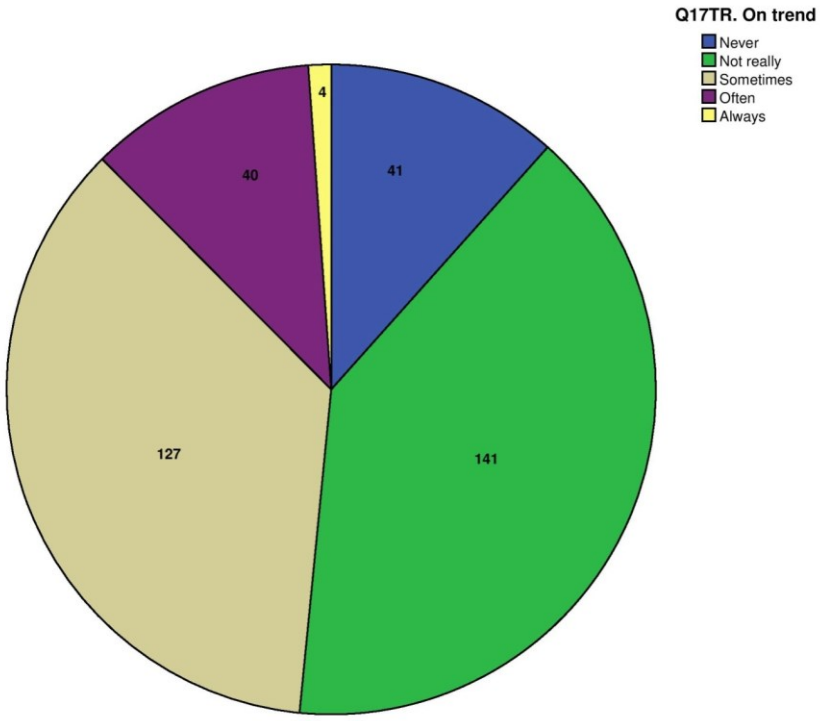


Figure 277. Q17TR. On trend

Table 130. Information on clothes, fashion and shopping

Q18. Where do you find information on clothes, fashion and shopping?	Frequency
Magazines and newspapers	134
Retailers or brands or fashion websites	157
Social media and blogs	141
TV Programmes and adverts	54
Email newsletters from fashion brands	86
Talking with family and friends	125
Shopping with friends or family	156
Other	38

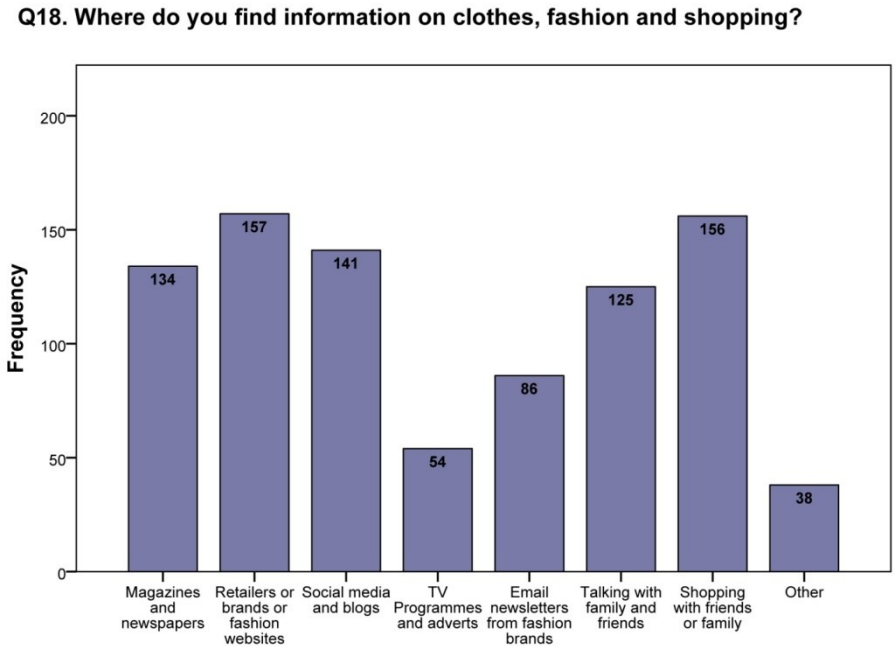


Figure 278. Q18. Where do you find information on clothes, fashion and shopping?

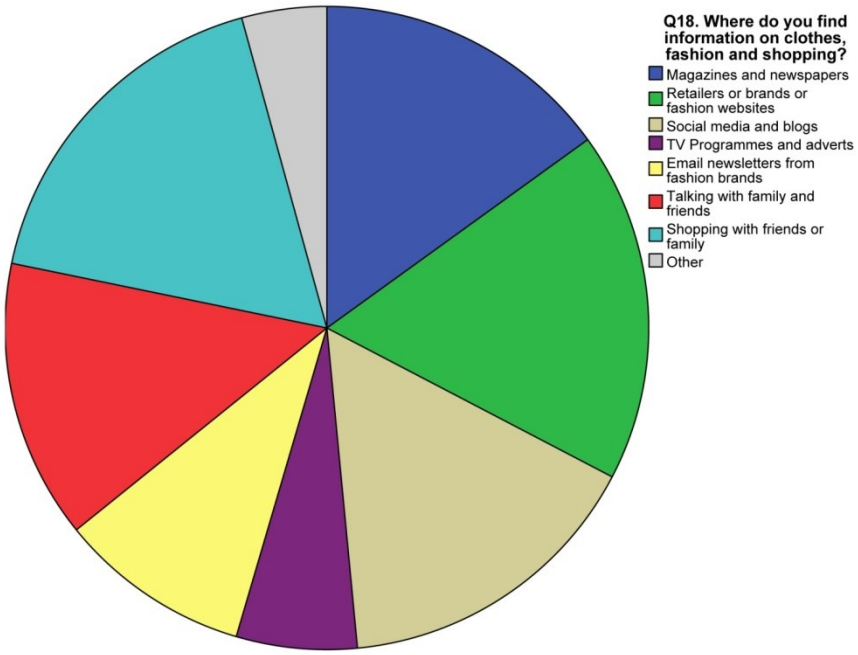


Figure 279. Q18. Where do you find information on clothes, fashion and shopping?

Table 131. Information on what to do with your old clothes

Q19. Where do you find information on what to do with your old clothes?	Frequency
TV programmes and adverts	15
Websites	53
Clothes shops	48
Flyers through the door	71
Magazines and newspapers	26
Talking with friends and family	132
From what I learnt at home, growing up	212
From what I learnt at school college or university	48
From my workplace	39
Other	35

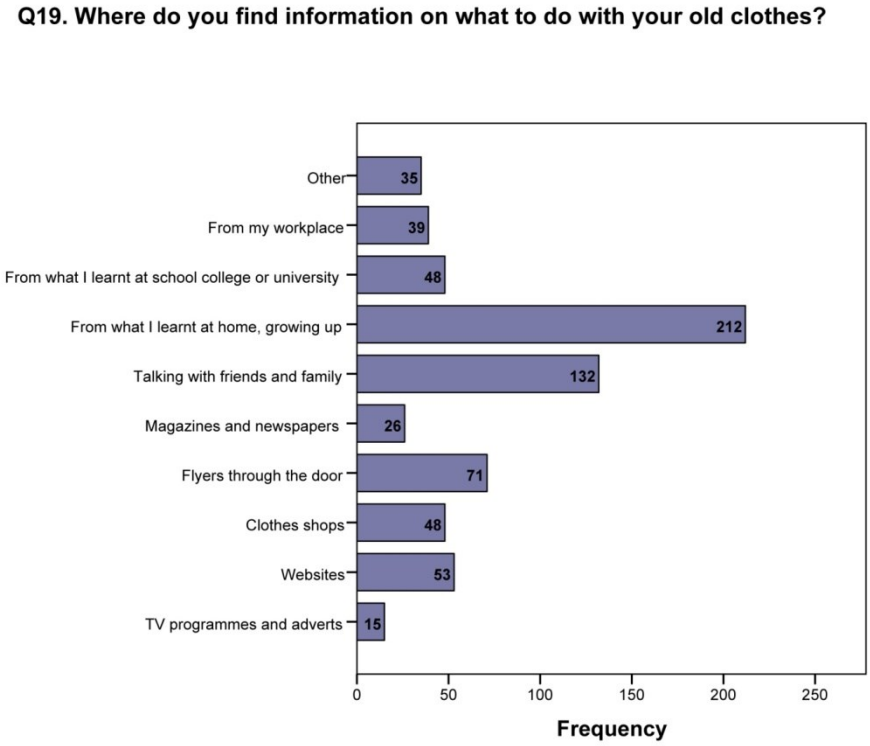


Figure 280. Q19. Where do you find information on what to do with your old clothes?

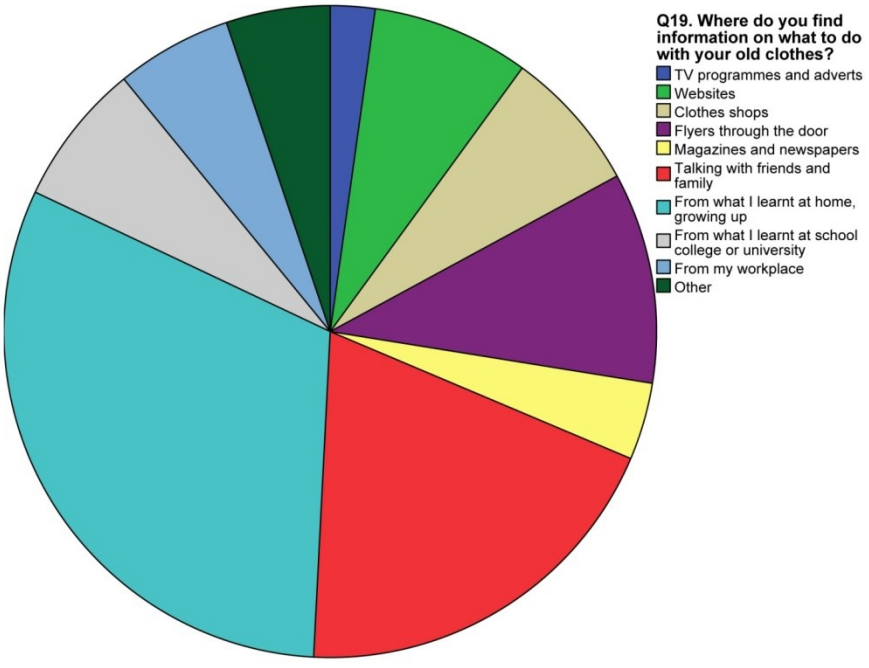


Figure 281. Q19. Where do you find information on what to do with your old clothes?

10.5.7 Outlook on Fashion Consumption and Ethics

The results of ANOVA tests and post hoc analysis for demographic variable and outlook on consumption and ethics are shown in the following tables.

Table 132. ANOVA Tests for Demographic Variables and Outlook on Consumption and Ethics 1

Variables	**Mean Scores of Age Groups**						*p<0.05, **p<0.01, ***p<0.001			**F Value**	**Sig.**
	18 to 24	**25 to 34**	**35 to 44**	**45 to 54**	**55 to 64**	**65 +**					
Q20EE	3.46	3.74	4.07	3.60	3.72	4.11	(Ethical and environmental issues are important to me)			2.8	0.019*
Q20SP	4.09	4.11	4.00	3.76	3.50	4.11	(I would buy ethical fashion if the style and price were right for me)			3	0.011*
Q20RB	3.76	4.08	4.09	4.33	4.25	4.56	(I use reusable shopping bags whenever I can)			2.6	0.025*
Variables	**Mean Scores of Education Level Groups**									**F Value**	**Sig.**
	Secondary school	**Sixth form college**	**University graduate**	**University post-graduate**							
Q20EB	2.47	2.43	2.75	2.87		(I have purchased clothing because of the ethics of the brand making it)				2.7	0.045*

Table 133. ANOVA Tests for Demographic Variables and Outlook on Consumption and Ethics 2

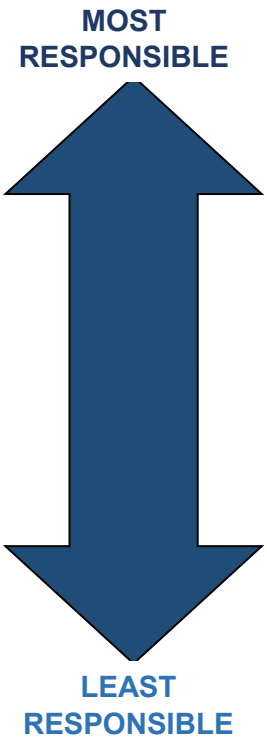
Variables	**Mean Scores of Employment Status Groups**									**F Value**	**Sig.**
	Employed, working full-time	**Employed, working part-time**	**Not employed, looking for work**	**Not employed, NOT looking for work**	**Self employed**	**Retired**	**Disabled, not able to work**	**In education or training**	**Other**		
Q20EE	3.51	3.79	3.85	3.50	4.18	3.88	4.00	3.70	4.00	2.3	0.019*
(Ethical and environmental issues are important to me)											
Variables	**Mean Scores of Relationship Status Groups**									**F Value**	**Sig.**
	Married	**Widowed**	**Divorced**	**Separated**	**Civil Partnership**	**Cohabiting**	**Single**	**Other**			
Q20RB	4.26	2.00	4.43	4.40	4.07	4.10	3.92	3.45		2.50	0.018*
(I use reusable shopping bags whenever I can)											

Table 134. ANOVA Post Hoc Analysis for Demographic Variables and Outlook on Consumption and Ethics

Post Hoc Analysis					
Variables		**Age Groups**		**Mean Difference**	**Sig.**
Q20EE	Ethical and environmental issues are important to me	18 to 24	35 to 44	-0.613	0.009**
Q20SP	I would buy ethical fashion if the style and price were right for me	18 to 24	55 to 64	0.586	0.036*
Q20SP	I would buy ethical fashion if the style and price were right for me	25 to 34	55 to 64	0.612	0.010*
Q20RB	I use reusable shopping bags whenever I can	18 to 24	45 to 54	-0.576	0.038*
Variables		**Education Level Groups**		**Mean Difference**	**Sig.**
Q20EB	I have purchased clothing because of the ethics of the brand making it	Sixth form college	University post-graduate	-0.445	0.043*

Table 135. Mean Scores for Responsibility Ranking

1	**3.78**	Q21**FD**	Fashion Designers, Retailers, Brands and Shops
2	**3.05**	Q21**FE**	Factories and Employers
3	**3.00**	Q21**GO**	The Government
4	**2.63**	Q21**ME**	The Media
5	**2.54**	Q21**CU**	Customers



10.5.7.1 Outlook on Fashion consumption and Ethics Graphs and Charts

Q20. To what extent do you agree with the following statements?

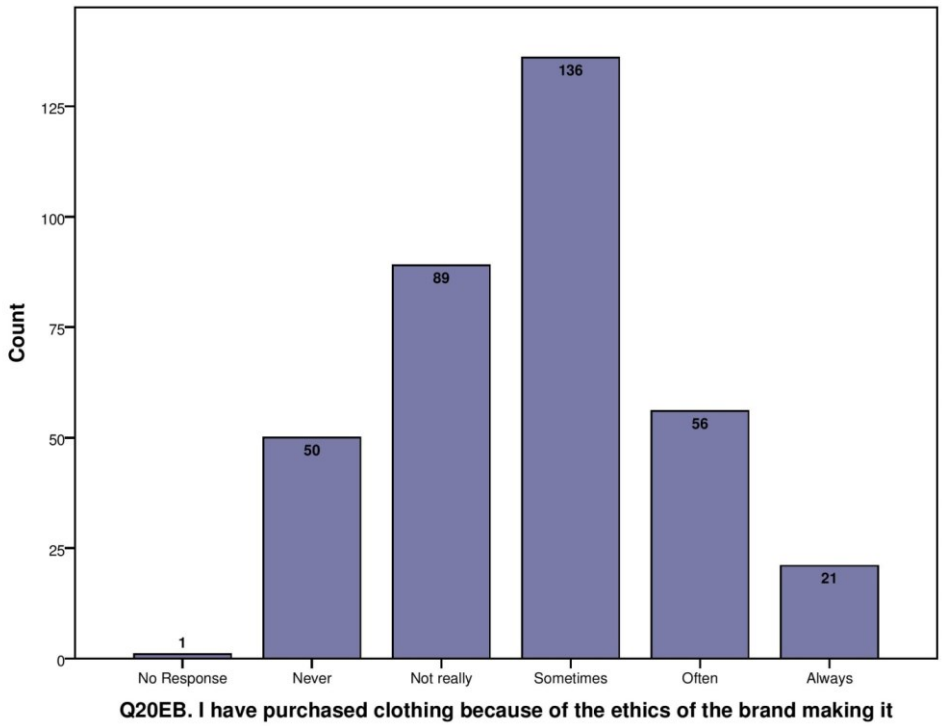


Figure 282. Q20EB. I have purchased clothing because of the ethics of the brand making it

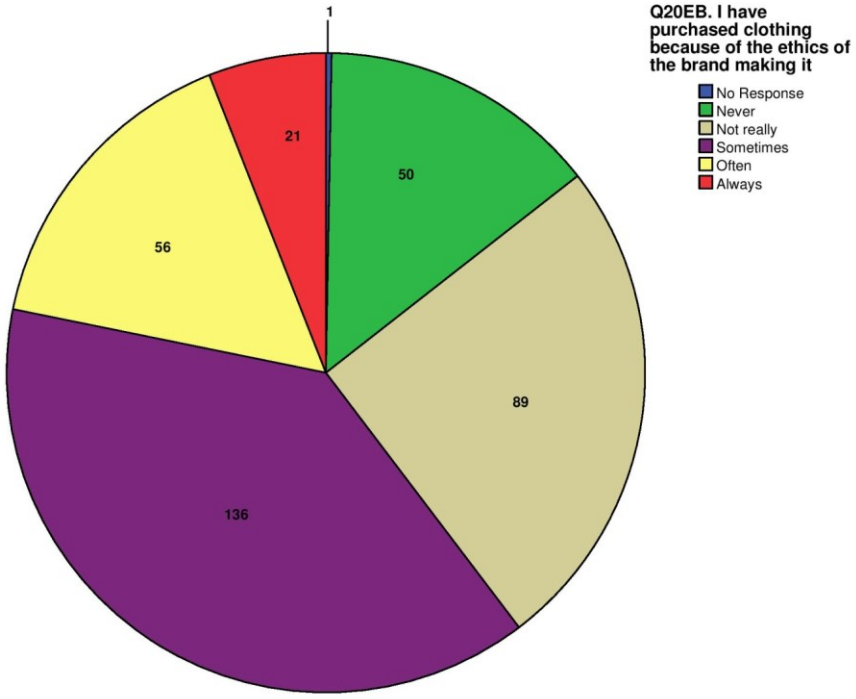


Figure 283. Q20EB. I have purchased clothing because of the ethics of the brand making it

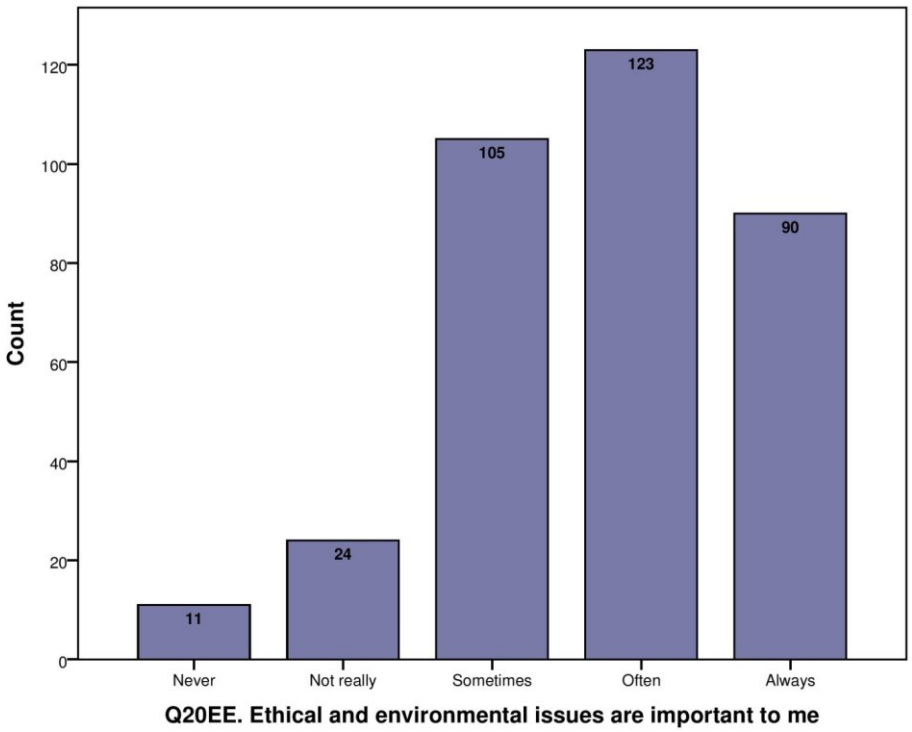


Figure 284. Q20EE. Ethical and environmental issues are important to me

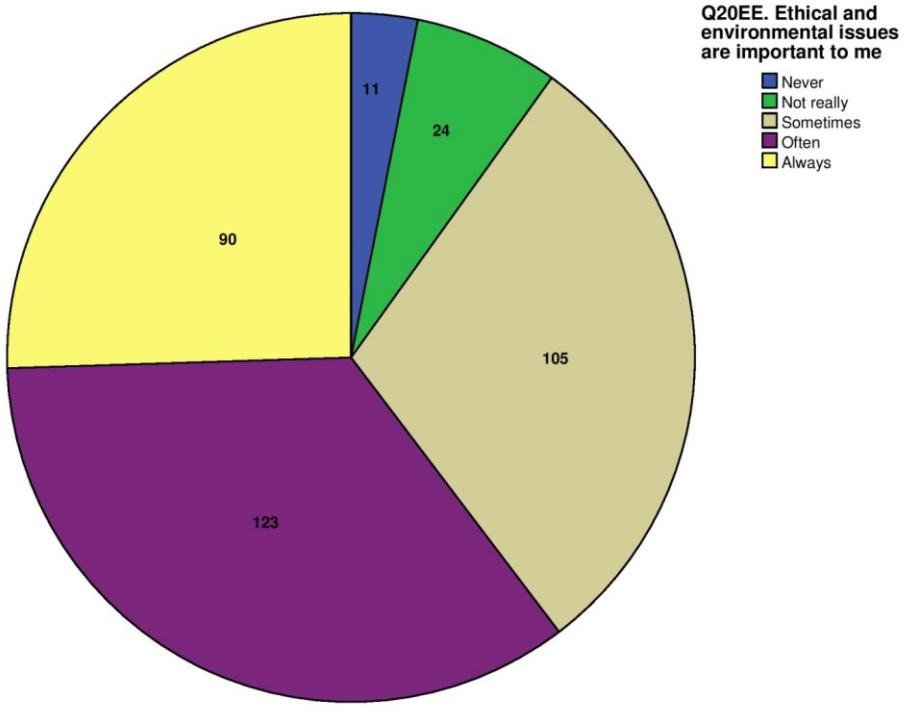


Figure 285. Q20EE. Ethical and environmental issues are important to me

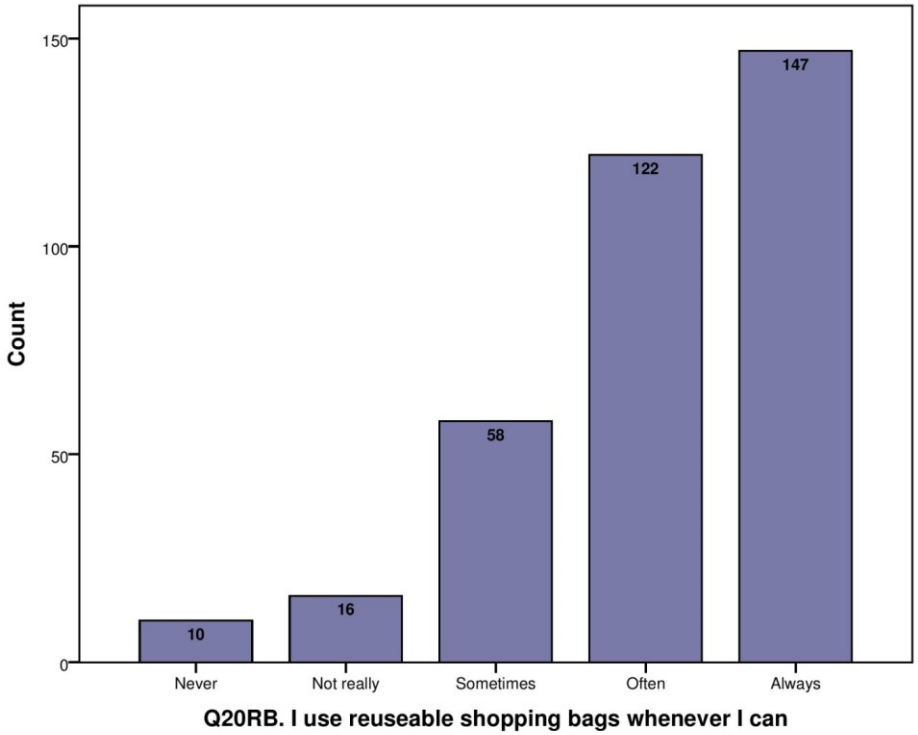


Figure 286. Q20RB. I use reusable shopping bags whenever I can

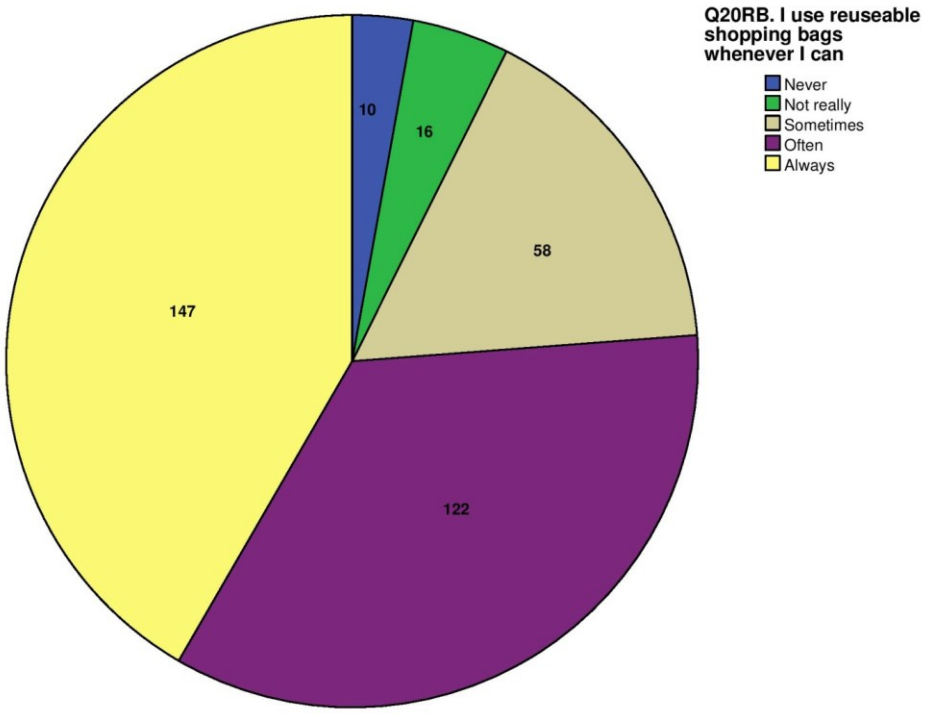


Figure 287. Q20RB. I use reusable shopping bags whenever I can

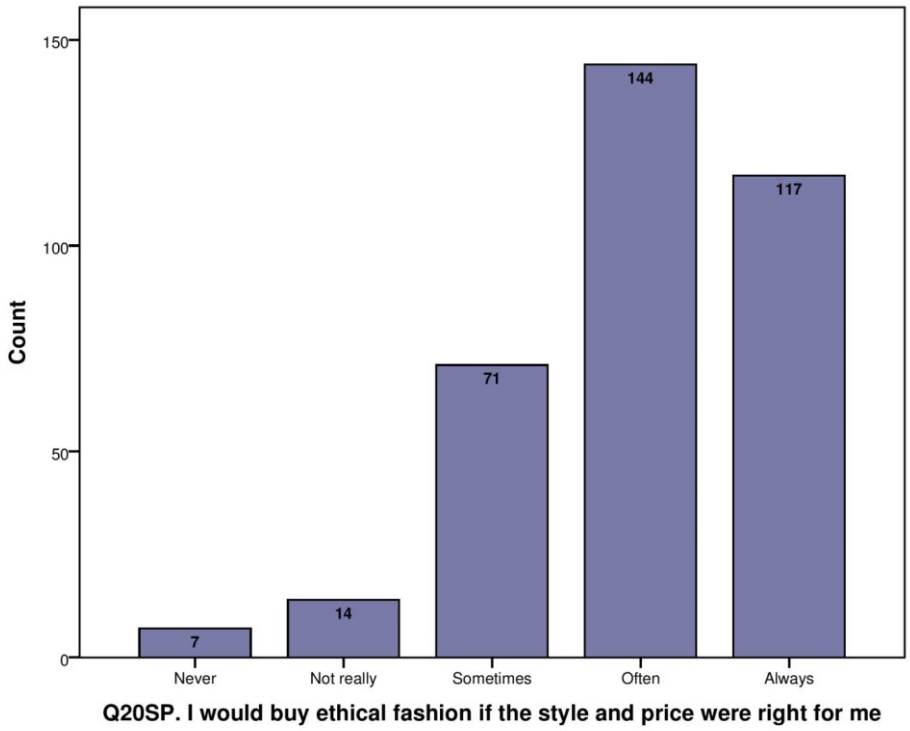


Figure 288. Q20SP. I would buy ethical fashion if the style and price were right for me

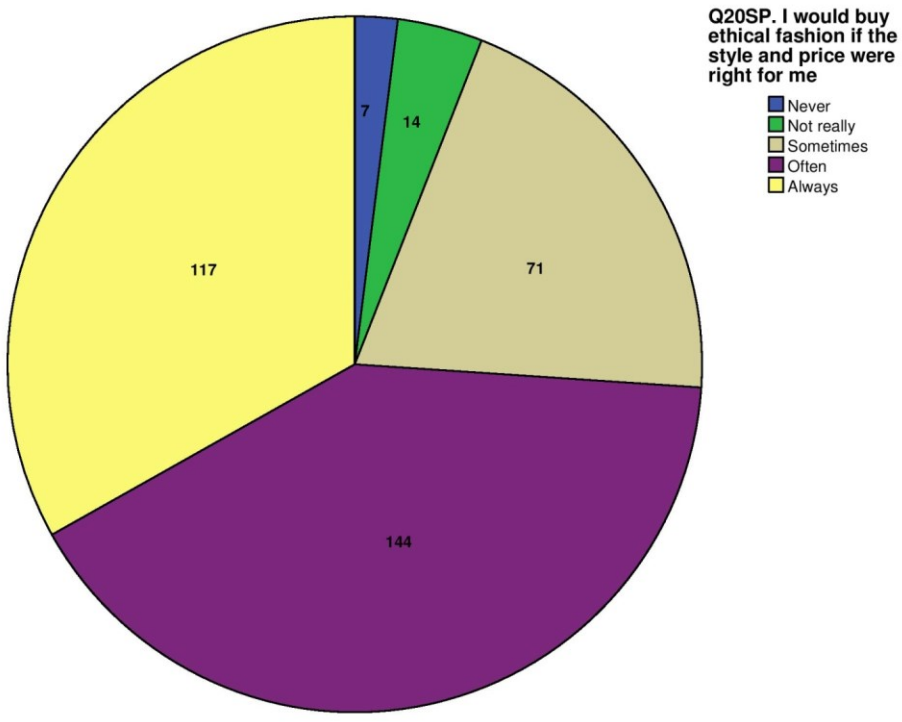


Figure 289. Q20SP. I would buy ethical fashion if the style and price were right for me

Q21. Please rank who you think should take the most responsibility for making ethical and environmental choices in fashion (5 = most responsible, 1 = least responsible)

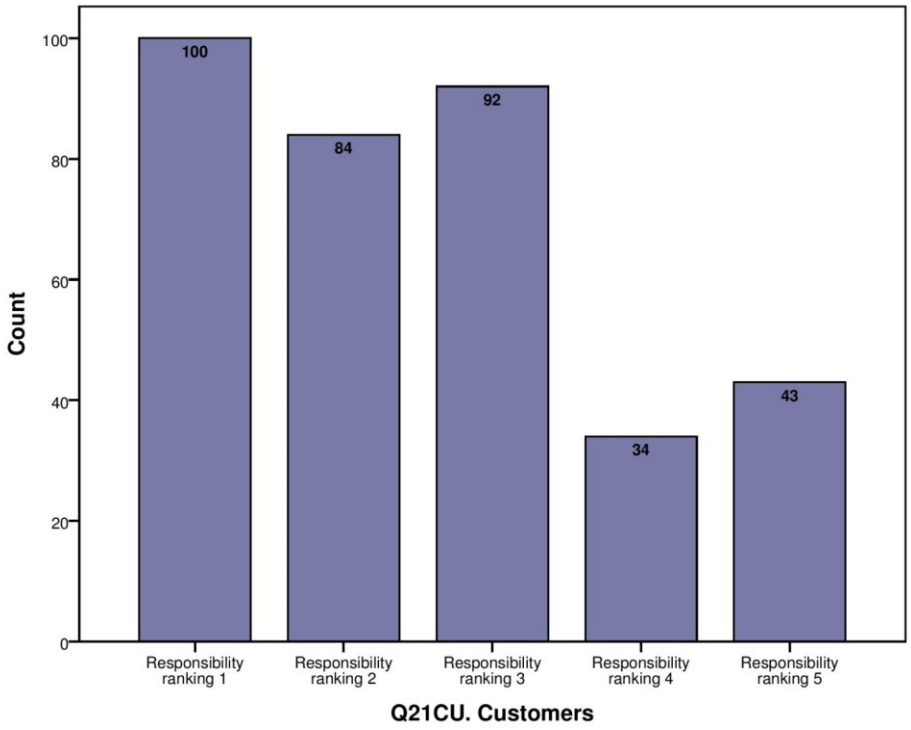


Figure 290. Q21CU. Customers

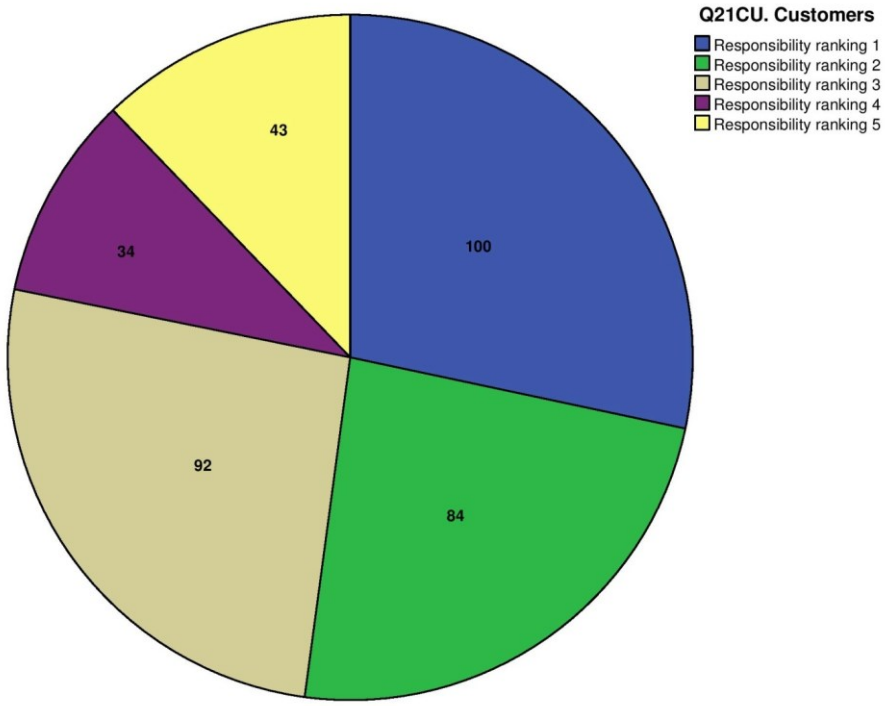


Figure 291. Q21CU. Customers

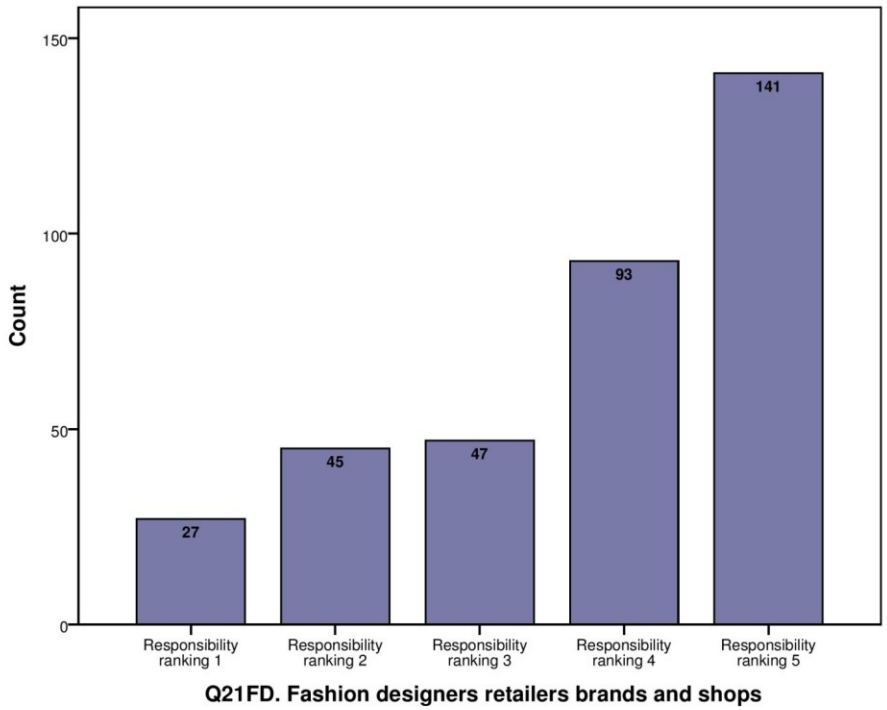


Figure 292. Q21FD. Fashion designers, brands, retailers, shops

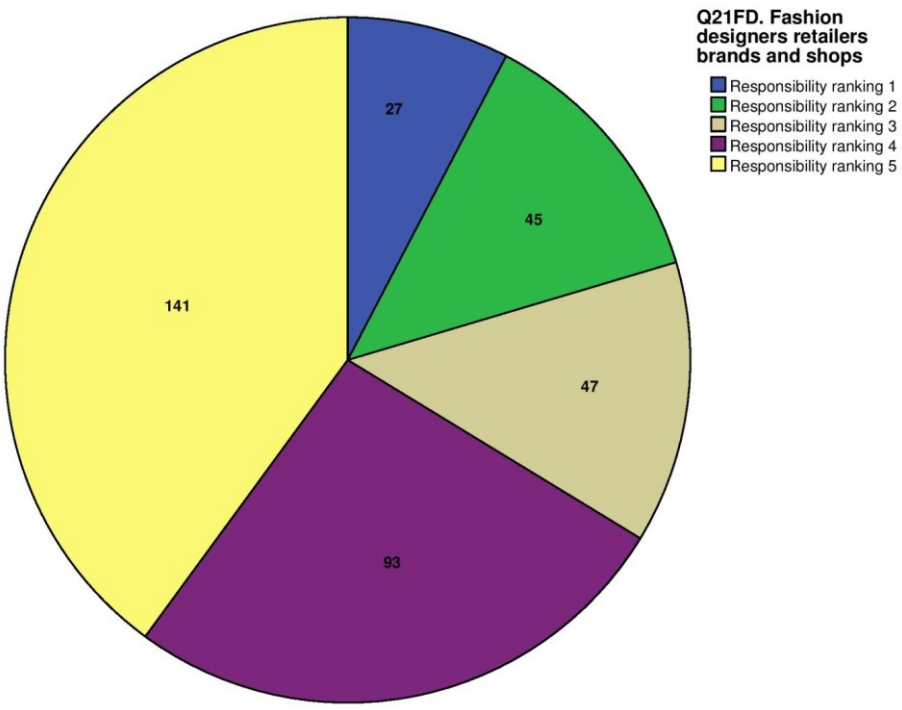


Figure 293. Q21FD. Fashion designers, brands, retailers, shops

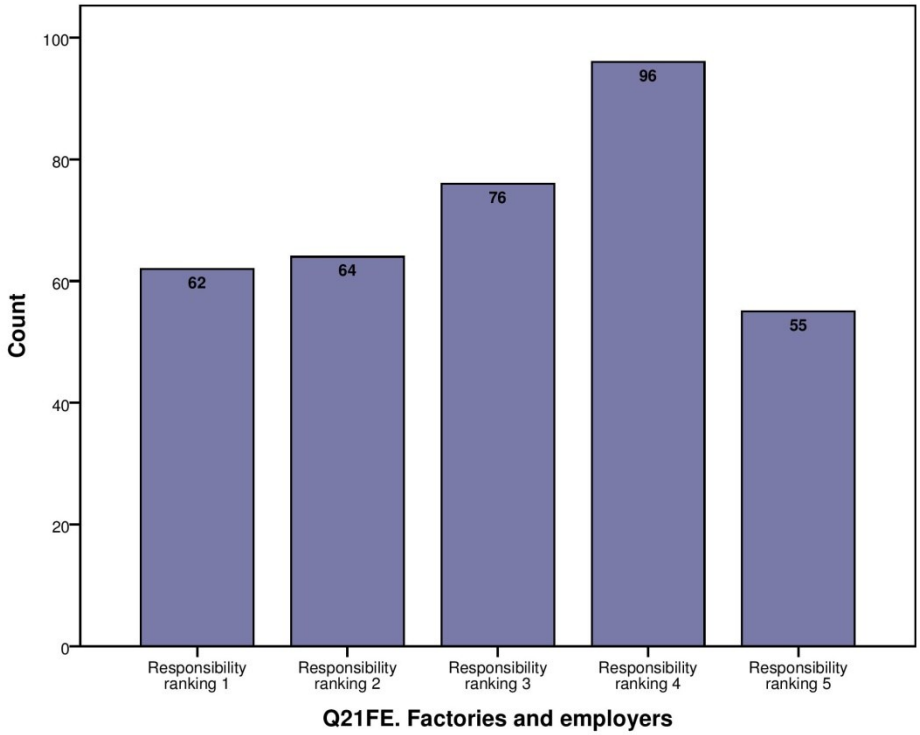


Figure 294. Q21FE. Factories and employers

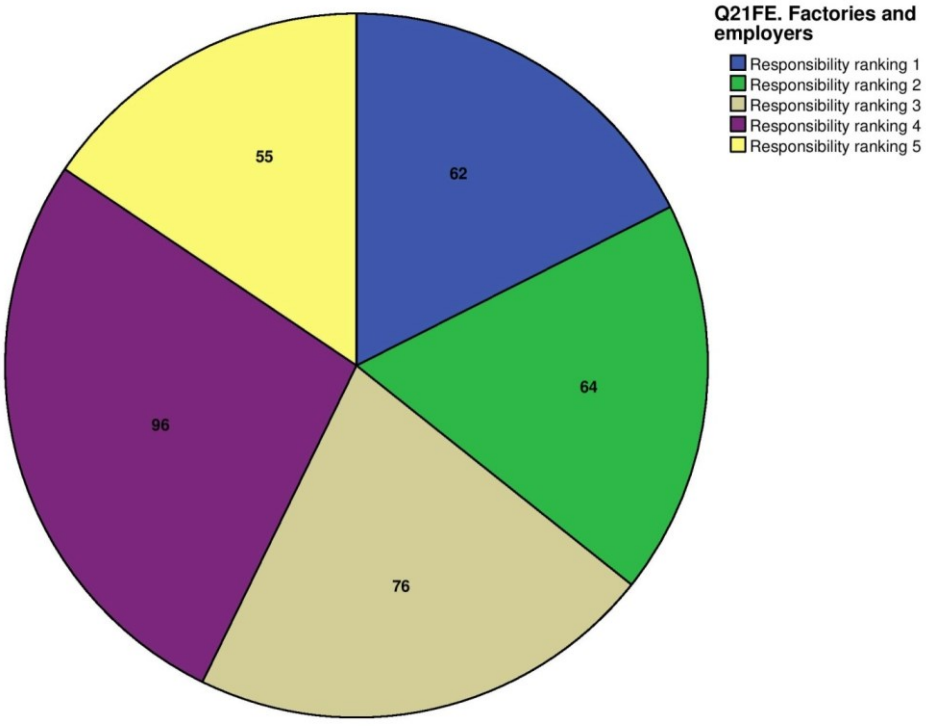


Figure 295. Q21FE. Factories and employers

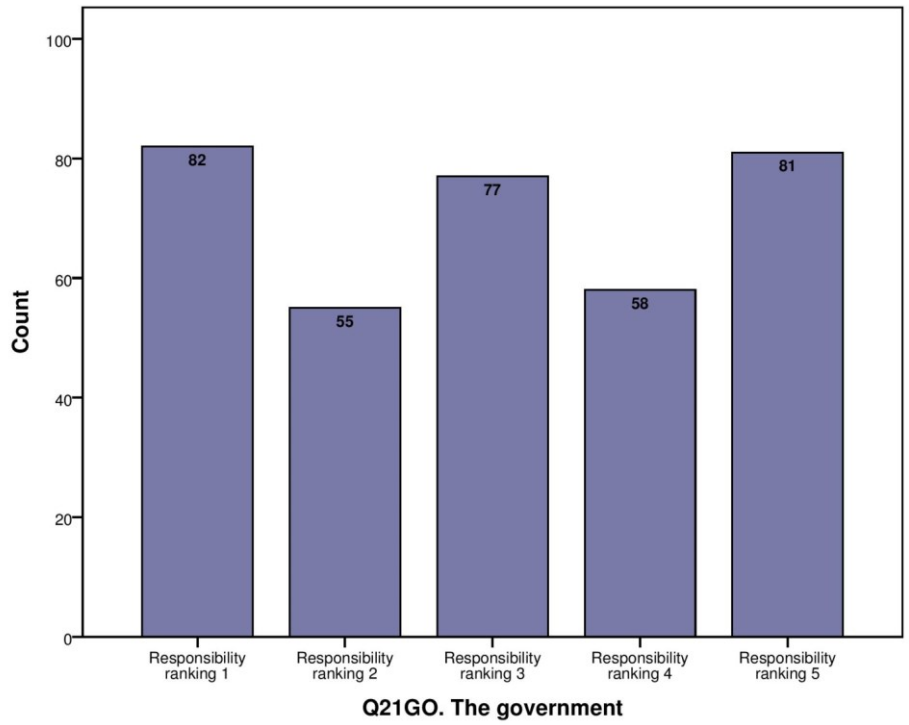


Figure 296. Q21GO. The government

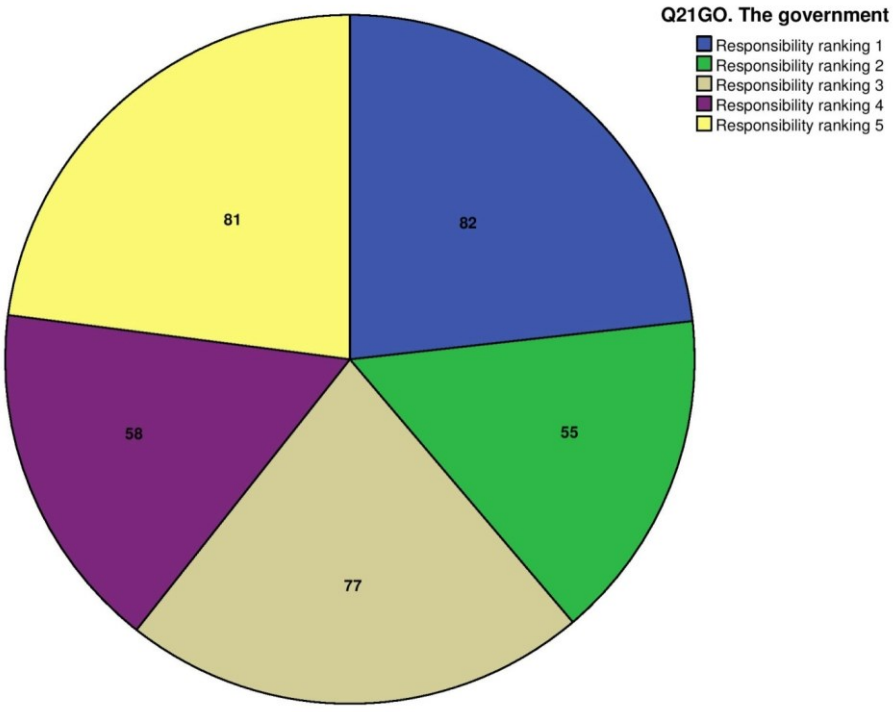


Figure 297. Q21GO. The government

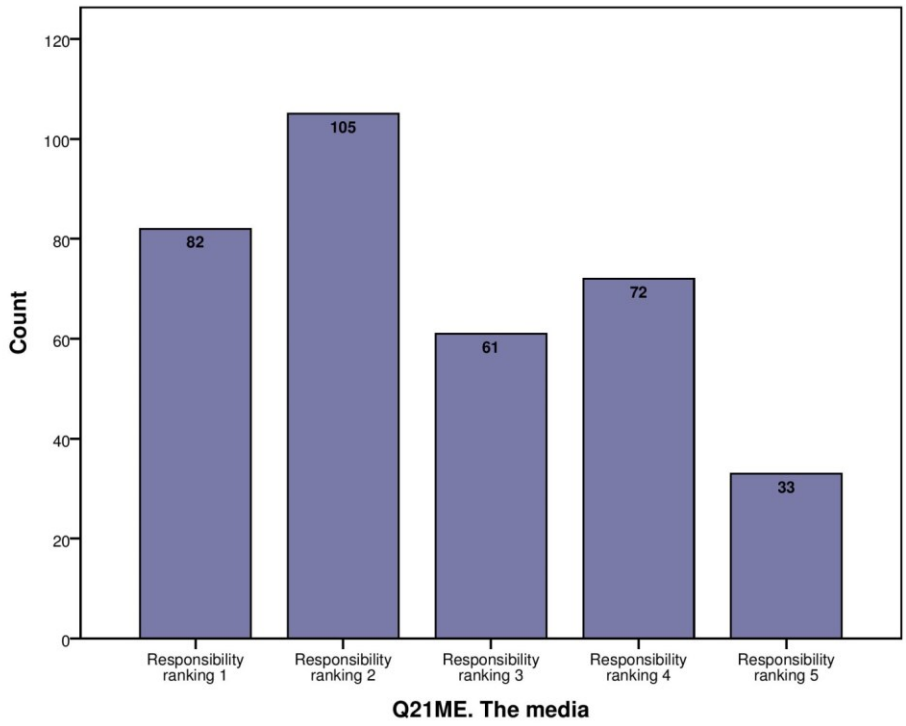


Figure 298. Q21ME. The media

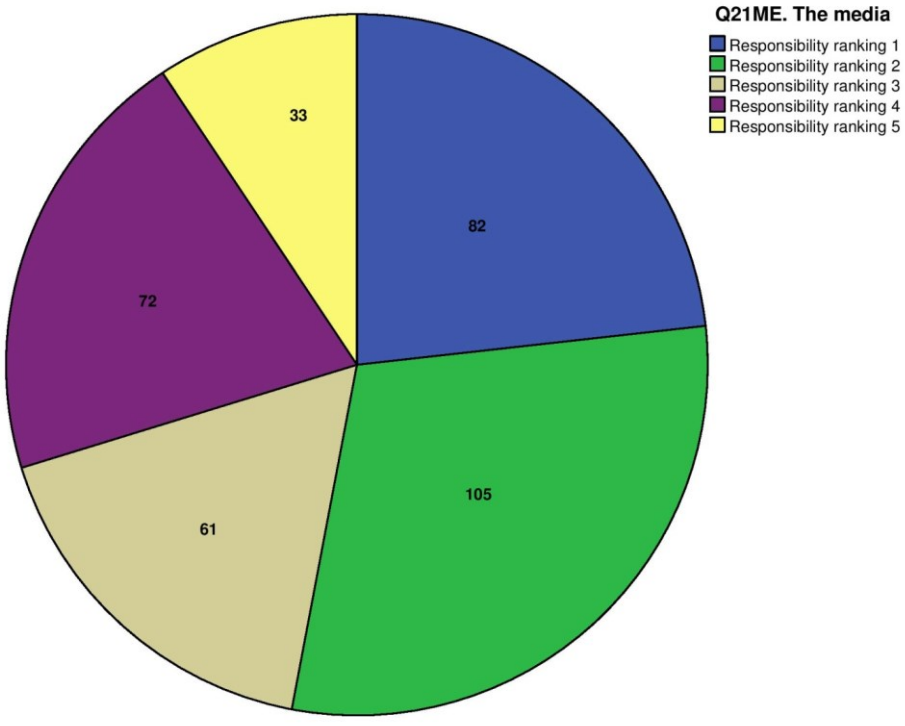


Figure 299. Q21ME. The media

10.6 Appendix F Ethics Documents & Interviewee Clearance

MUTUAL NON-DISCLOSURE AGREEMENT

THIS AGREEMENT is made on 14th March 2013
BETWEEN:

(1) **The Manchester Metropolitan University** (MMU) of All Saints, Manchester, M15 6BH, United Kingdom.

(2) **I & G Cohen** of Castle Works, Bazaar Street, Pendlton, Salford, M6 6GS

WHEREAS:

(1) The parties wish to carry on confidential discussions and negotiations in relation to [a postgraduate research project between the parties (the "**Purpose**"). This will allow the formulation of ab @as-is" business model of the company and lead to the development of a business plan involving upcycling. (2) During such discussions and negotiations it may be necessary for either of the parties (the "**Disclosing Party**") to disclose Confidential Information (as defined below) to the other party (the "**Recipient**").

(3) The parties wish to protect their respective Confidential Information from unauthorised disclosure or use and to define their mutual rights and obligations in respect of the Confidential Information.

THE PARTIES AGREE AS FOLLOWS:

1. As used herein, "**Confidential Information**" shall mean any and all technical and non-technical information provided by the Disclosing Party to the Recipient, including but not limited to patent and patent applications, proprietary information, ideas, techniques, sketches, drawings, works of authorship, models, inventions, data, databases, know-how, processes, apparatuses, equipment, algorithms, copyrights, software programs, software source documents, formulae, trade and business names, trade marks, service marks and designs related to the current, future, and proposed products and services of each of the parties, and including, without limitation, their respective information concerning research, experimental work, development, design details and specifications, engineering, financial information, procurement requirements, purchasing, manufacturing, customer lists, investors, employees, business and contractual relationships, business forecasts, business plans, sales and merchandising, marketing plans and information provided by the Disclosing Party to the Recipient relating to third parties provided that such information, if written, is clearly and conspicuously marked as being proprietary or confidential or has a marking denoting the same meaning.

   Confidential Information imparted orally or by demonstration or by any other non-tangible means or form shall be declared at the time of disclosure that it is imparted in confidence and a written summary of the Confidential Information shall be sent to the Recipient within thirty (30) days of the date of the original disclosure.

   Confidential Information shall also include any information which can be obtained by examination testing or analysis of any hardware or any component part thereof

provided by the Disclosing Party notwithstanding the fact that the requirements for marking and designation referred to above shall not have been fulfilled.

2. Each party agrees that at all times and notwithstanding any termination or expiration of this Agreement it will hold in strict confidence and not disclose to any third party Confidential Information of the other (except as approved in writing by the other party to this Agreement) and will use the Confidential Information for no purpose other than in relation to the Purpose.

3. Each party shall only permit access to Confidential Information of the other party to those of its employees or authorized representatives having a need to know and who have signed confidentiality agreements or are otherwise bound by confidentiality obligations at least as restrictive as those contained herein.

4. Each party shall immediately notify the other upon discovery of any loss or unauthorized disclosure of the Confidential Information of the other party.

5. Each party's obligations under this Agreement with respect to any portion of the other party's Confidential Information shall terminate when the Recipient can document that the Confidential Information disclosed: (a) was in the public domain at the time it was communicated to the Recipient by the Disclosing Party; (b) entered the public domain subsequent to the time it was communicated to the Recipient by the Disclosing Party through no fault of the Recipient; (c) was in the Recipient's possession free of any obligation of confidence at the time it was communicated to the Recipient by the Disclosing Party; (d) was rightfully communicated to the Recipient free of any obligation of confidence subsequent to the time it was communicated to the Recipient by the Disclosing Party; (e) was developed by employees or agents of the Recipient independently of and without reference to any information communicated to the Recipient by the Disclosing Party; (f) was communicated to the Recipient by an unaffiliated third party free of any obligation of confidence and (g) the communication was in response to a valid order by a court or other governmental or regulatory body or was otherwise required by law.

6. The obligations of confidentiality contained in this Agreement shall continue in force for a period of five [5] years from the Effective Date or three [3] years from the date of termination of the Agreement whichever period is the longer.

7. Upon termination or expiration of the Agreement, or upon written request of the other party, each party shall promptly return to the other all documents and other tangible materials representing the other's Confidential Information and all copies thereof.

8. The parties recognize and agree that nothing contained in this Agreement shall be construed as granting any property rights, by license or otherwise, to any Confidential Information of the other party disclosed pursuant to this Agreement, or to any invention or any patent, copyright, trade mark, or other intellectual property right that has issued or that may issue, based on such Confidential Information.

9. No party shall make, have made, use or sell for any purpose any product or other item using, incorporating or derived from any Confidential Information of the other party.

10. Confidential Information shall not be reproduced in any form except as required to accomplish the intent of this Agreement. The Recipient's obligations under this

Agreement shall survive termination of the Agreement between the parties and shall be binding upon the Recipient's heirs, successors and assigns.

11. This Agreement shall be governed by and construed in accordance with the laws of England and the parties hereby submit to the exclusive jurisdiction of the English Courts.

12. Each party acknowledges that its breach of the Agreement will cause irreparable damage and hereby agrees that the other party shall be entitled to seek injunctive relief under this Agreement, as well as such further relief as may be granted by a court of competent jurisdiction.

13. If any provision of this Agreement is found by a proper authority to be unenforceable or invalid such unenforceability or invalidity shall not render this Agreement unenforceable or invalid as a whole and in such event, such provision shall be changed and interpreted so as to best accomplish the objectives of such unenforceable or invalid provision within the limits of applicable law or applicable court decisions.

14. No party shall communicate any information to the other in violation of the proprietary rights of any third party.

15. No party will assign or transfer any rights or obligations under this Agreement without the prior written consent of the other party.

16. All notices or reports permitted or required under this Agreement shall be in writing and shall be delivered by personal delivery, electronic mail, facsimile transmission or by certified or registered mail, return receipt requested, and shall be deemed given upon personal delivery, five (5) days after deposit in the mail, or upon acknowledgment of receipt of electronic transmission. Notices shall be sent to the addresses set forth at the beginning of this Agreement or such other address as either party may specify in writing.

17. This Agreement may not be amended except in writing, signed by all parties.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date written above.

SIGNED BY the duly authorised representatives of the Parties on the date stated at the beginning of this Agreement.

MMU Staff receiving information:

Signed _____

Name _____

MMU Staff receiving information:

Signed _____

Name Phoebe R. Apeaggyei

MMU Staff receiving information:

Signed _____

Name DAVID J. TYLER

MMU Research Student:

Signed _____

Name SARA HAN

MMU Deputy Vice-Chancellor / Chief Operating Officer and Financial Director

Signed _____

Name _____

[Finance Director of I+G Cohen]

Signed _____

Name PHILIP GELLER

SIGNED BY the duly authorised representatives of the Parties on the date stated at the beginning of this Agreement.

MMU Staff receiving information:

Signed _____

Name PRISCILLA CHAN

MMU Staff receiving information:

Signed _____

Name _____

MMU Staff receiving information:

Signed _____

Name _____

MMU Research Student:

Signed _____

Name _____

MMU Deputy Vice-Chancellor / Chief Operating Officer and Financial Director

Signed _____

Name _____

[Finance Director of I+G Cohen]

Signed _____

Name _____

RE: Data confidentiality inquiry

Phil Geller <phil@igcohen.com>

Tue 17/01/2017 15:28

To:Sara Han <S.Han@mmu.ac.uk>;

Hi Sara

Happy New Year!

Lets go for option 1. Sorry for delay in getting back to you.

By the way I have just been linked with Claudia Henniger, lecturer at Manchester Uni in Fashion marketing management. I see you are a mutual connection. Do you know her well? Her area of work looks very interesting.

Best regards

Phil

From: Sara Han [mailto:S.Han@mmu.ac.uk]
Sent: 30 December 2016 20:03
To: Phil Geller
Subject: Re: Data confidentiality inquiry

Hi Phil,

Hope you have had a good Christmas. I was just wondering how you wanted me to handle I&G Cohen's confidentiality in my PhD thesis?

As mentioned previously the suggested options are:
1. Named openly in the thesis and future publications.
2. Named in the thesis only and anonymised thereafter.
3. Anonymised completely and referred to by a code in the thesis.

Please do let me know what you would be most happy with.

My deadline for hand in in the 11th January, so if I don't hear from you by the 6th January I will go with the third option, in which I&G Cohen is anonymised completely.

Thanks so much and all the best for 2017,

Sara

From: Sara Han
Sent: 17 November 2016 11:20
To: Phil Geller
Subject: RE: Data confidentiality inquiry

Manchester Metropolitan University

HOLLINGS FACULTY - RESEARCH ETHICS

Any research undertaken by the student stated below will be conducted, recorded and presented in accordance with the guidelines set out by the University Academic Ethics Committee. These guidelines are known as the MMU Academic Ethical Framework and may be accessed at: http://www.red.mmu.ac.uk/documents/res_files/ethics/ethical_framework.doc They are compatible with those published by the ESRC and other responsible bodies.

Name of student: **Sara Han**

Project/Dissertation title: **Can Sustainable Design Solutions Reduce UK Clothing and Textile Waste?**

Student statement:

Before any research is undertaken, I would like to assure collaborators and participants of the following points:

- Participation in an interview is entirely voluntary.
- Participants are free to refuse to answer a question at any time.
- Participants are free to withdraw from an interview at any time.
- The interview/questionnaire will be kept strictly confidential and will be available only within Hollings Faculty.
- Excerpts from this interview/questionnaire may be incorporated into a project report or dissertation, but under no circumstances will names or personal characteristics be included without prior consent.

Signed: .....

Sara Han

Interviewee acceptance:

Signed: .....

Print Name: .....

Date: .....

David Tyler
DAVID TYLER

25/9/13

Manchester Metropolitan University

HOLLINGS FACULTY - RESEARCH ETHICS

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Name of student: **Sara Han**

Research title: **Can Sustainable Design Solutions Reduce UK Clothing and Textile Waste?**

Student statement:

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- The interview/questionnaire will be kept strictly confidential and will be available only within Hollings Faculty.
- Excerpts from this interview/questionnaire may be incorporated into a project report or dissertation, but under no circumstances will names or personal characteristics be included without prior consent.

Signed: ..... Print Name: **Sara Han**

Interviewee acceptance:

Signed: ..... Print Name: CLAIRE DAWSON

Date: 21/07/14

This is your copy to keep

Sara Han

From: Sarah Klymkiw <sarah@traid.org.uk>
Sent: 16 November 2016 10:12
To: Sara Han
Subject: RE: Interview confidentiality inquiry

Hi Sara,

Claire left TRAID in September last year however it's fine to use our full names.

Hope you're keeping well.

Kindest Regards,

Sarah

Sarah Klymkiw
Head of Education
020 8733 2594

http://traid.org.uk
https://twitter.com/TRAID

If you're interested in joining TRAID's monthly newsletter, sign up here

From: Sara Han [mailto:S.Han@mmu.ac.uk]
Sent: 15 November 2016 17:56
To: Claire Dawson <claire@traid.org.uk>
Cc: Sarah Klymkiw <sarah@traid.org.uk>
Subject: Interview confidentiality inquiry

Hello Claire,

I hope you are well. I am getting in touch to ask what your preferences are regarding references to TRAID, including yourself, Sarah Klymkiw and Dalston shop manager Zita Varga during interviews and data collection from July 2014, in my PhD thesis and any future publications?

Are you happy for TRAID and yourself, Sarah and Zita to be referred to by name in the work, or would you prefer all references to be anonymised?

Please do let me know your preferences and I will make sure they are adhered to.

Best regards,

Sara

07964 072 879

Sara Li-Chou Han
PhD Candidate
Manchester Metropolitan University
Room C2.17 Cavendish Building, Cavendish Street, Manchester, M15 6BG
Tel. 0161 247 2603 Ext. 40614
S.Han@mmu.ac.uk

Sara Han

From: Ross Barry <ross@lmb.co.uk>
Sent: 16 November 2016 06:55
To: Sara Han
Subject: RE: Interview confidentiality inquiry

Hi Sara

More than happy for you to reference us as you see fit

Hope it is going well

Ross

From: Sara Han [mailto:S.Han@mmu.ac.uk]
Sent: 15 November 2016 18:00
To: Ross Barry <ross@lmb.co.uk>
Subject: Interview confidentiality inquiry

Hello Ross,

I hope you are well. I am getting in touch regarding a research visit for my PhD study in July 2014.

Please could you let me know what your preferences are regarding references to yourself and to LMB in my PhD thesis and any future publications from the work?

Are you happy for LMB and for yourself to be named directly, or would you prefer all references to be anonymised?

Please do let me know your preferences and I will make sure they are adhered to.

Best regards,

Sara

Manchester Metropolitan University

HOLLINGS FACULTY - RESEARCH ETHICS

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They are compatible with those published by the ESRC and other responsible bodies.

Name of student: **Sara Han**

Research title: **Can Sustainable Design Solutions Reduce UK Clothing and Textile Waste?**

Student statement:

Before any research is undertaken, I would like to assure collaborators and participants of the following points:

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- Participants are free to refuse to answer a question at any time.
- Participants are free to withdraw from an interview at any time.
- The interview/questionnaire will be kept strictly confidential and will be available only within Hollings Faculty.
- Excerpts from this interview/questionnaire may be incorporated into a project report or dissertation, but under no circumstances will names or personal characteristics be included without prior consent.

Signed: ..... Print Name: **Sara Han**

Interviewee acceptance:

Signed: ..... Print Name: ANNA-MARIA HEISE
JULIA CRAI

Date: 24th July 2014

This is your copy to keep

Sara Han

From: Here Today Here Tomorrow <hello@heretoday-heretomorrow.com>
Sent: 16 November 2016 09:23
To: Sara Han
Subject: RE: Interview confidentiality inquiry

Morning Sara,

Oh yes I remember :) great.

All the best,
Anna

On 15 Nov 2016 6:53 pm, "Sara Han" <S.Han@mmu.ac.uk> wrote:

Hi Anna-Maria,

Thanks so much for the prompt reply! My thesis is on 'Circular Economy Fashion Strategies', in particular textile recycling, upcycling, sustainable fashion retail and consumers.

I came to visit you while you were in the shop in Dalston in July 2014.

Best regards,

Sara

From: Here Today Here Tomorrow [mailto:hello@heretoday-heretomorrow.com]
Sent: 15 November 2016 18:46
To: Sara Han <S.Han@mmu.ac.uk>; Julia Crew <julia@heretoday-heretomorrow.com>
Subject: Re: Interview confidentiality inquiry

Hello Sara,

We would be happy for you to use our names. If you could just remind us what your thesis was about? Sorry we have been interviewed from various students and organisations over the years! Congratulations though for being close to submitting your PHD :)

1

Sara Han

From: upcycling fashion <info@upcycling-fashion.de>
Sent: 16 November 2016 15:10
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Dear Sara,

Please feel free to use my name and the one of the Upcycling Fashion Store.
I´m happy to hear that you are finalizing your thesis. I hope you are well and hope to hear from you soon for updates, when you are done with your PhD.

I wish you all the best!
Arianna

--
Arianna Nicoletti

UPCYCLING
FASHION STORE

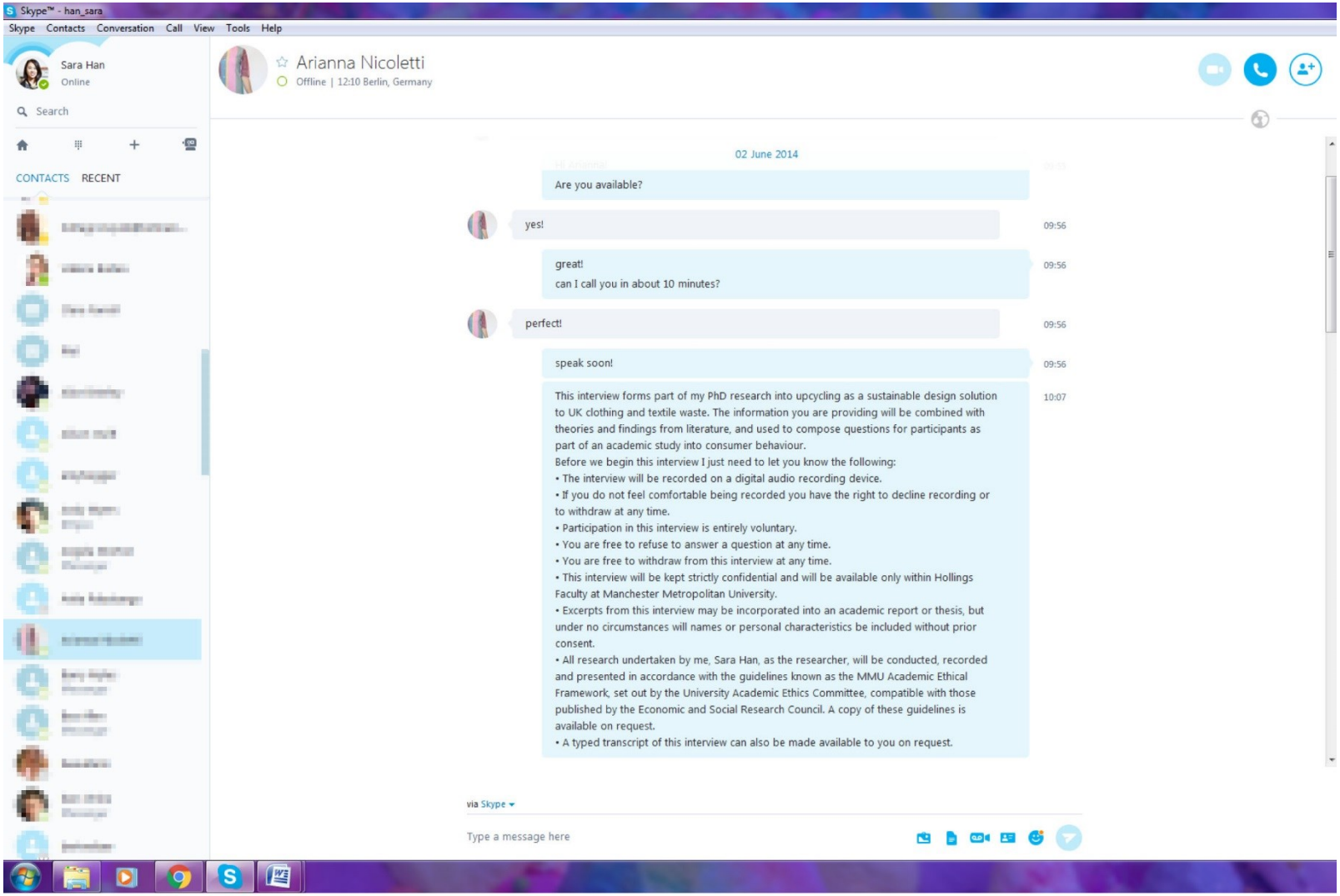
www.upcycling-fashion.de
info@upcycling-fashion.de

Anklamerstr. 17
10115 Berlin
+49 174 3455960

Am 15.11.2016 um 19:03 schrieb Sara Han <S.Han@mmu.ac.uk>:

> Hello Arianna,
>
> I hope all is well with you. I am now getting close to submitting my PhD thesis and am getting in touch to ask if you would mind me referring to you and to the Upcycling Fashion Store directly by name in my thesis and any future publications from the work, or if you would prefer any references to be anonymised?
>
> Please do let me know what you prefer and I will make sure this is adhered to.

1


Skype™ - han_sara
Skype Contacts Conversation Call View Tools Help
Sara Han
Online
Search
CONTACTS RECENT
Arianna Nicoletti
Offline | 12:10 Berlin, Germany
02 June 2014
Are you available?
yes!
09:56
great!
can I call you in about 10 minutes?
09:56
perfect!
09:56
speak soon!
09:56
This interview forms part of my PhD research into upcycling as a sustainable design solution to UK clothing and textile waste. The information you are providing will be combined with theories and findings from literature, and used to compose questions for participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
• The interview will be recorded on a digital audio recording device.
• If you do not feel comfortable being recorded you have the right to decline recording or to withdraw at any time.
• Participation in this interview is entirely voluntary.
• You are free to refuse to answer a question at any time.
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic Ethical Framework, set out by the University Academic Ethics Committee, compatible with those published by the Economic and Social Research Council. A copy of these guidelines is available on request.
• A typed transcript of this interview can also be made available to you on request.
10:07
via Skype
Type a message here

Sara Han

From: Clare Farrell <clare@nosuchthing.clothing>
Sent: 15 November 2016 19:34
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Hi love - so long as you make me sound clever and good you can name away :)

When are you free to go out on the razz and let your hair down?.. soon I hope, oh and you are down here soon for circ thing? I don't have a ticket but maybe we can have a drink and you can give me the debrief... or record the keynote! xxx

Clare Farrell
Founder

No Such Thing Clothing
+44 7973427179
clare@nosuchthing.clothing
http://www.nosuchthing.clothing

Supported by Collective

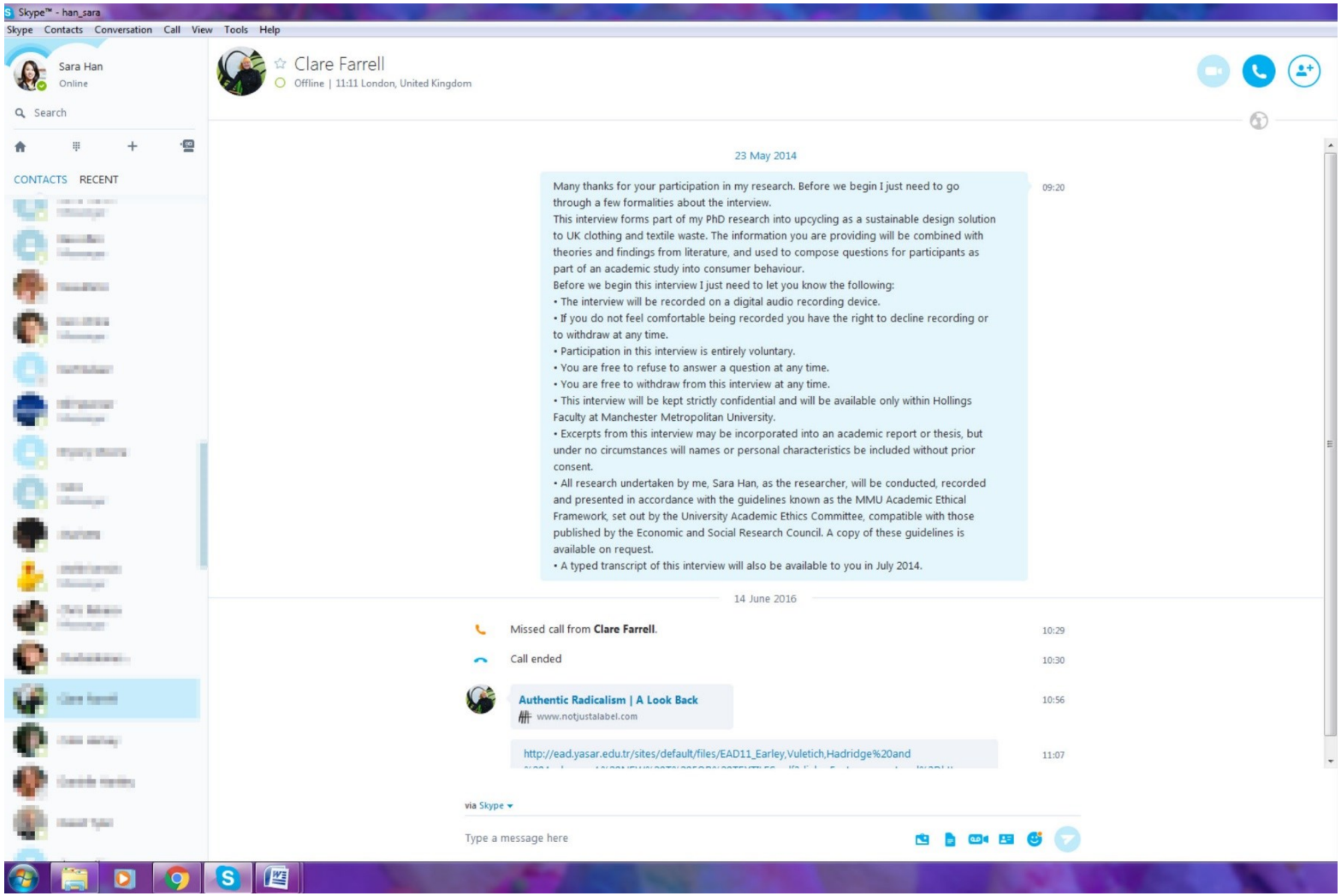
On 15 November 2016 at 18:05, Sara Han <S.Han@mmu.ac.uk> wrote:

Hello Clare,

I hope all is well with you. I am now getting close to submitting my PhD thesis and am getting in touch to ask if you would mind me referring to you and to No Such Thing directly by name in my thesis and any future publications from the work, or if you would prefer any references to be anonymised?

Please do let me know what you prefer and I will make sure this is adhered to.

1


Skype™ - han_sara
Skype Contacts Conversation Call View Tools Help
Sara Han
Online
Search
CONTACTS RECENT
Clare Farrell
Offline | 11:11 London, United Kingdom
23 May 2014
Many thanks for your participation in my research. Before we begin I just need to go through a few formalities about the interview.
This interview forms part of my PhD research into upcycling as a sustainable design solution to UK clothing and textile waste. The information you are providing will be combined with theories and findings from literature, and used to compose questions for participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
• The interview will be recorded on a digital audio recording device.
• If you do not feel comfortable being recorded you have the right to decline recording or to withdraw at any time.
• Participation in this interview is entirely voluntary.
• You are free to refuse to answer a question at any time.
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic Ethical Framework, set out by the University Academic Ethics Committee, compatible with those published by the Economic and Social Research Council. A copy of these guidelines is available on request.
• A typed transcript of this interview will also be available to you in July 2014.
09:20
14 June 2016
Missed call from Clare Farrell. 10:29
Call ended 10:30
Authentic Radicalism | A Look Back
www.notjustalabel.com 10:56
http://ead.yasar.edu.tr/sites/default/files/EAD11_Earley,Vuletich,Hadridge%20and 11:07
via Skype
Type a message here

Sara Han

From: Christian Smith <cjapsmith@gmail.com>
Sent: 18 November 2016 10:15
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Yes that works.

On Fri, 18 Nov 2016, 10:42 Sara Han, <S.Han@mmu.ac.uk> wrote:

Hi Christian,

That's perfect, thanks so much.

Shall I refer to you as 'Christian Smith, Director of Inclusi'?

Best regards,

Sara

From: Christian Smith [cjapsmith@gmail.com]
Sent: 17 November 2016 21:49
To: Sara Han
Subject: RE: Interview confidentiality inquiry

Hi Sara,

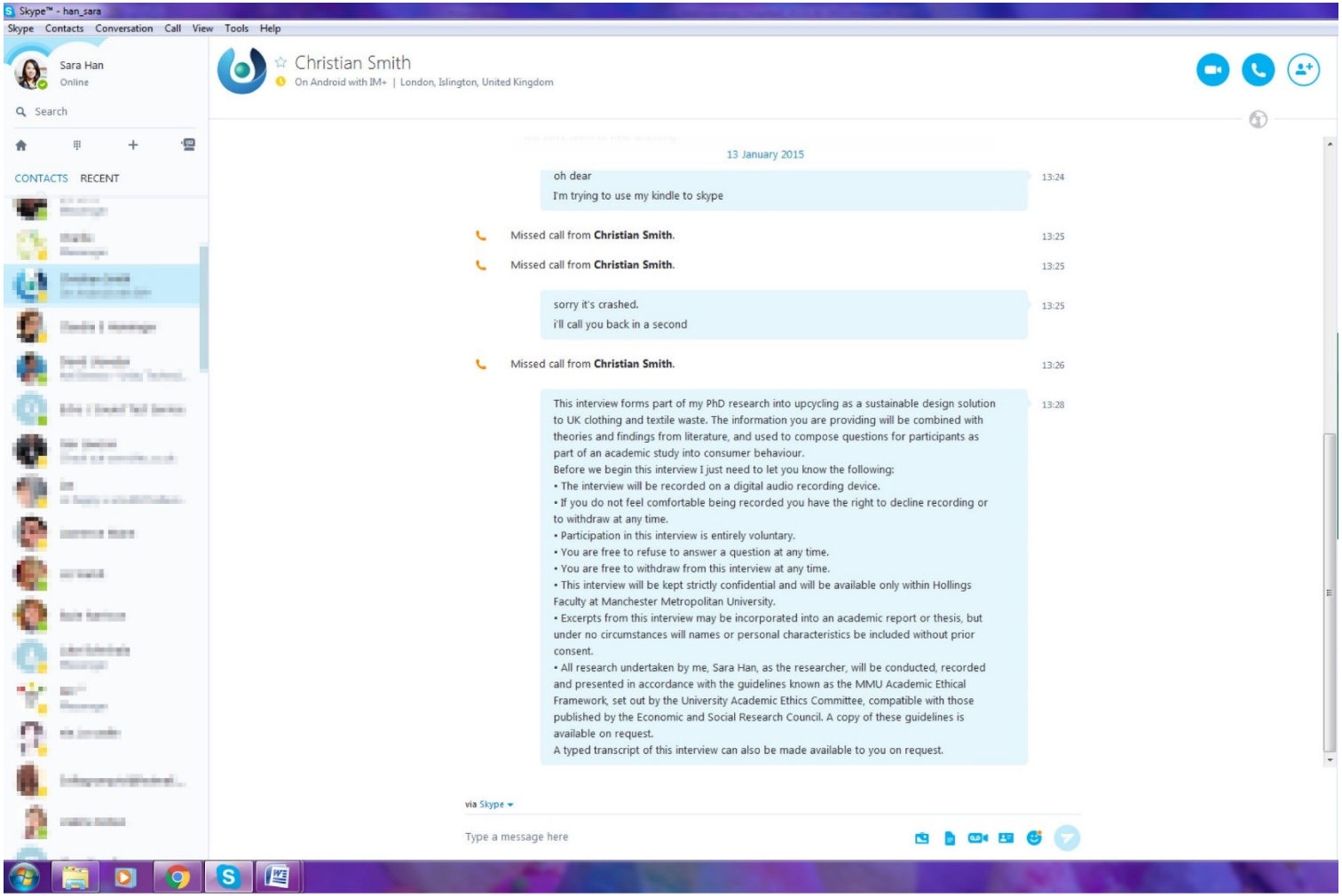
Good to hear from you. I am happy for you to use my name but I would rather you did not mention the companies. Is that ok?

Thank you.

Christian

From: Sara Han [mailto:S.Han@mmu.ac.uk]
Sent: Thursday, November 17, 2016 11:28 AM
To: cjapsmith@gmail.com
Subject: Interview confidentiality inquiry

Hello Christian,


Skype™ - han_sara
Skype Contacts Conversation Call View Tools Help
Sara Han
Online
Search
CONTACTS RECENT
Christian Smith
On Android with IM+ | London, Islington, United Kingdom
13 January 2015
oh dear
I'm trying to use my kindle to skype
13:24
Missed call from Christian Smith.
13:25
Missed call from Christian Smith.
13:25
sorry it's crashed.
i'll call you back in a second
13:25
Missed call from Christian Smith.
13:26
This interview forms part of my PhD research into upcycling as a sustainable design solution to UK clothing and textile waste. The information you are providing will be combined with theories and findings from literature, and used to compose questions for participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
• The interview will be recorded on a digital audio recording device.
• If you do not feel comfortable being recorded you have the right to decline recording or to withdraw at any time.
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• You are free to refuse to answer a question at any time.
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic Ethical Framework, set out by the University Academic Ethics Committee, compatible with those published by the Economic and Social Research Council. A copy of these guidelines is available on request.
A typed transcript of this interview can also be made available to you on request.
13:28
via Skype
Type a message here

Sara Han

From: DANIEL CURTIS <redmutha@btopenworld.com>
Sent: 17 November 2016 11:02
To: Sara Han
Subject: Re: Interview confidentiality inquiry

hello,we are happy for you to use our name directly and good luck with it all xxx

On Thursday, November 17, 2016 10:27 AM, Sara Han <S.Han@mmu.ac.uk> wrote:

Hello Daniel and Red,

I hope you are both well. I am getting in touch regarding inquiries I have made regarding my PhD research into upcycling with you both during 2014.

I would like to inquire what your preferences would be regarding references to yourself and to Red Mutha in my PhD thesis and any future publications from the work.

Are you happy for Red Mutha and for yourselves to be named directly or would you prefer all references to be anonymised?

Please do let me know your preferences and I will make sure they are adhered to.

Thanks so much and best regards,

Sara

Sara Li-Chou Han
Research Associate, Resyntex Project
Manchester Fashion Institute
Faculty of Arts and Humanities
Manchester Metropolitan University
Room C2.17 Cavendish Building, Cavendish Street, Manchester, M15 6BG
Tel. 0161 247 2603 Ext. 40614
S.Han@mmu.ac.uk

www.resyntex.eu
fashioninstitute.mmu.ac.uk
mmu.academia.edu/SaraHan
www.saralichouhan.com

Sara Han

From: Gav THTC <gav@thtc.co.uk>
Sent: 16 November 2016 00:47
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Yes Sara it's fine for you to refer to THTC or myself.

Best, Gav

(Sent from my phone)

Gav Lawson

Managing Director

For and on behalf of

THTC Clothing Ltd
15A Princes Avenue

London. W38LX

Office: +44 (0) 208 566 4184
Mobile: +44 (0) 786 636 1119
Skype: gavthtc

Web: **www.thtc.co.uk**

Facebook Fan Page

Twitter: @gavthtc

2008 and 2010 'Future 100' winner

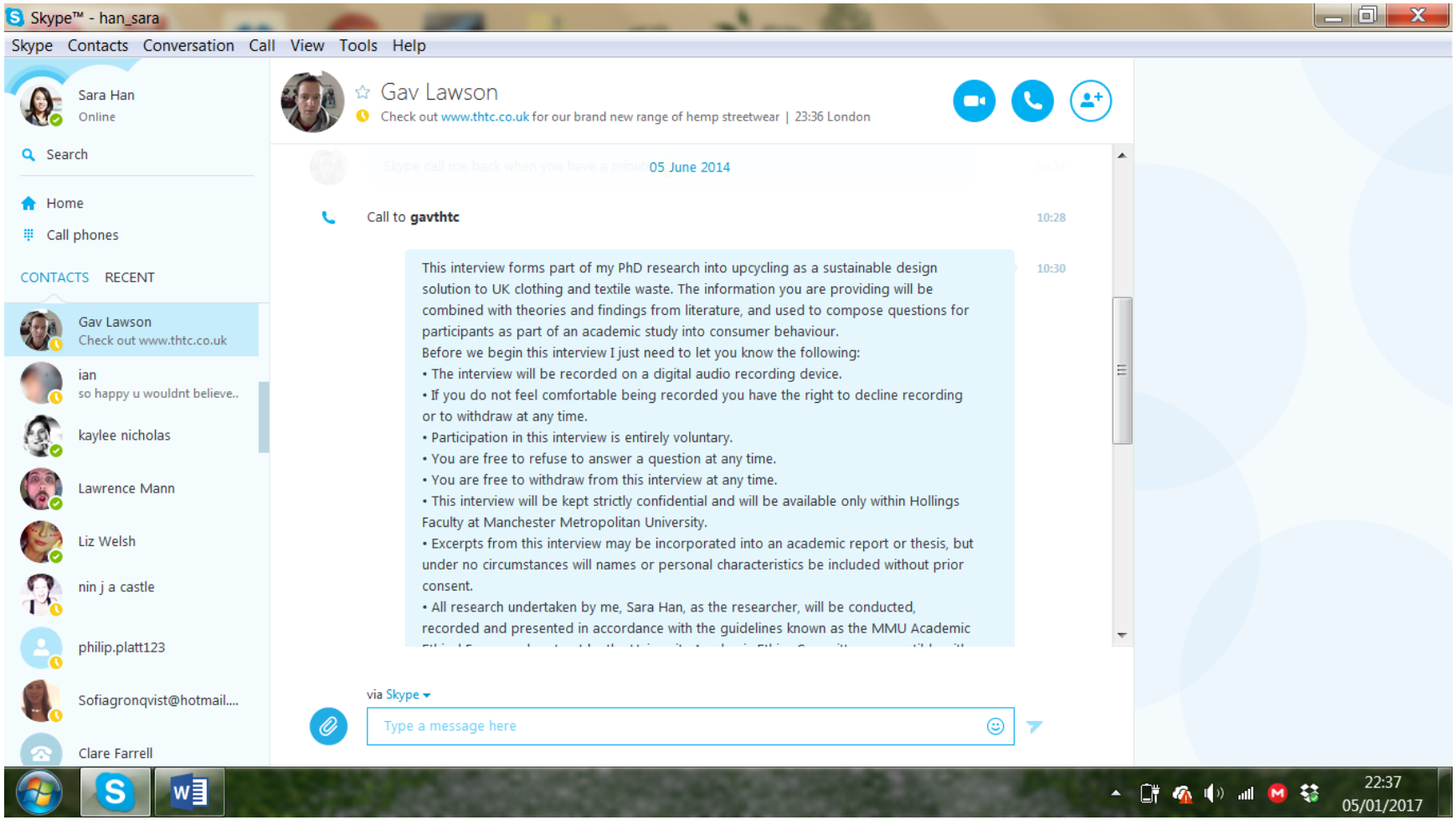
THTC is ranked the UK's most ethical menswear label

(www.ethicalconsumer.org)

On 15 Nov 2016, at 18:16, Sara Han <S.Han@mmu.ac.uk> wrote:

> Hello Gav,
>
> I hope all is well with you. I am getting in touch regarding an interview with you in June 2014 for my PhD research.
>
> I am now getting close to submitting my PhD thesis and am inquiring if you would mind me referring to you and to THTC directly by name in my thesis and any future publications from the work, or if you would prefer any references to be anonymised?

1


Skype™ - han_sara
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Sara Han
Online
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CONTACTS RECENT
Gav Lawson
Check out www.thtc.co.uk
ian
so happy u wouldnt believe..
kaylee nicholas
Lawrence Mann
Liz Welsh
nin j a castle
philip.platt123
Sofiagronqvist@hotmail....
Clare Farrell
Gav Lawson
Check out www.thtc.co.uk for our brand new range of hemp streetwear | 23:36 London
05 June 2014
Call to gavthtc
10:28
10:30
This interview forms part of my PhD research into upcycling as a sustainable design solution to UK clothing and textile waste. The information you are providing will be combined with theories and findings from literature, and used to compose questions for participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
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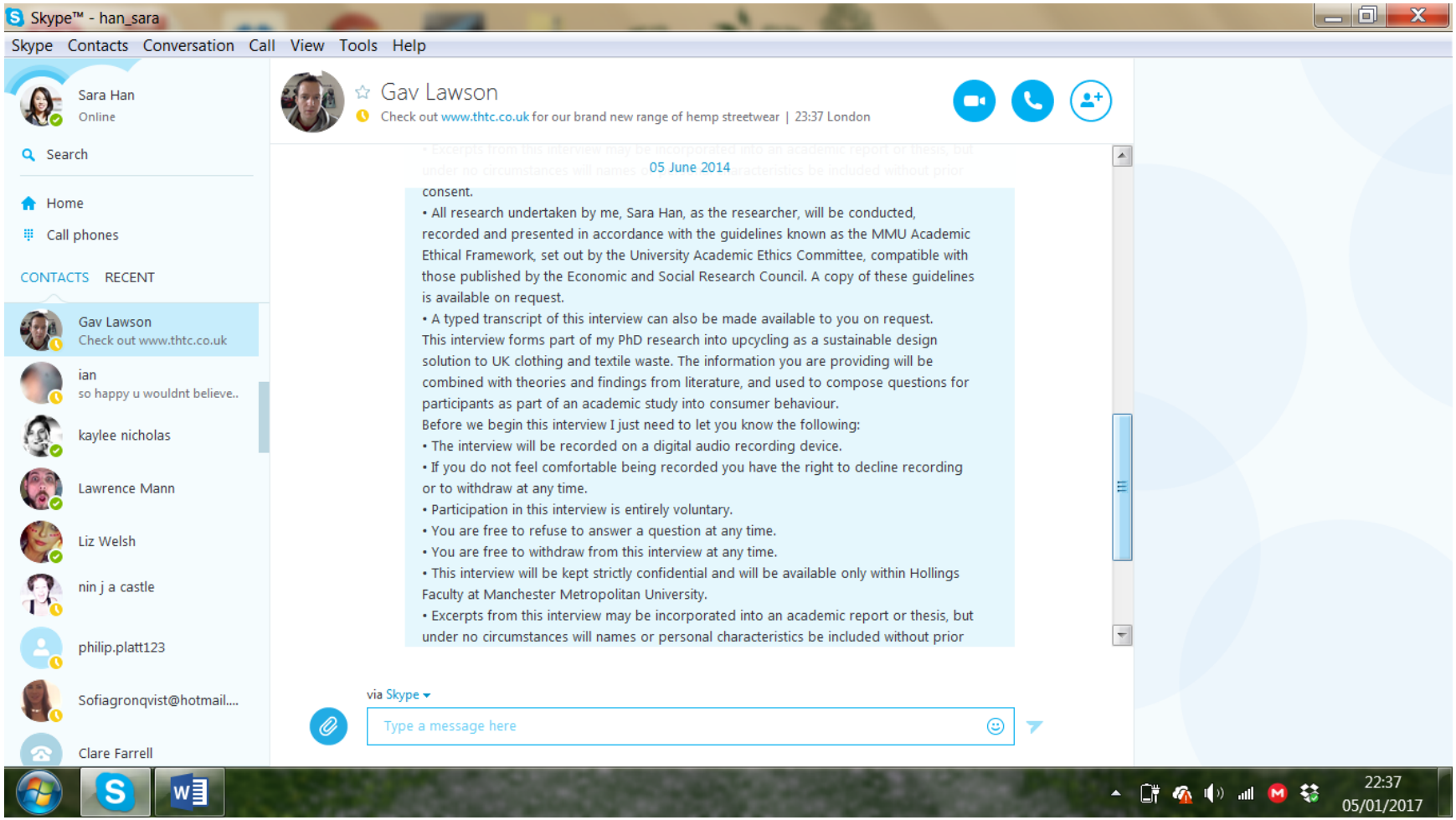
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic
via Skype
Type a message here
22:37
05/01/2017


Skype™ - han_sara
Skype Contacts Conversation Call View Tools Help
Sara Han
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Call phones
CONTACTS RECENT
Gav Lawson
Check out www.thtc.co.uk
ian
so happy u wouldnt believe..
kaylee nicholas
Lawrence Mann
Liz Welsh
nin j a castle
philip.platt123
Sofiagronqvist@hotmail....
Clare Farrell
Gav Lawson
Check out www.thtc.co.uk for our brand new range of hemp streetwear | 23:37 London
05 June 2014
consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic Ethical Framework, set out by the University Academic Ethics Committee, compatible with those published by the Economic and Social Research Council. A copy of these guidelines is available on request.
• A typed transcript of this interview can also be made available to you on request.
This interview forms part of my PhD research into upcycling as a sustainable design solution to UK clothing and textile waste. The information you are providing will be combined with theories and findings from literature, and used to compose questions for participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
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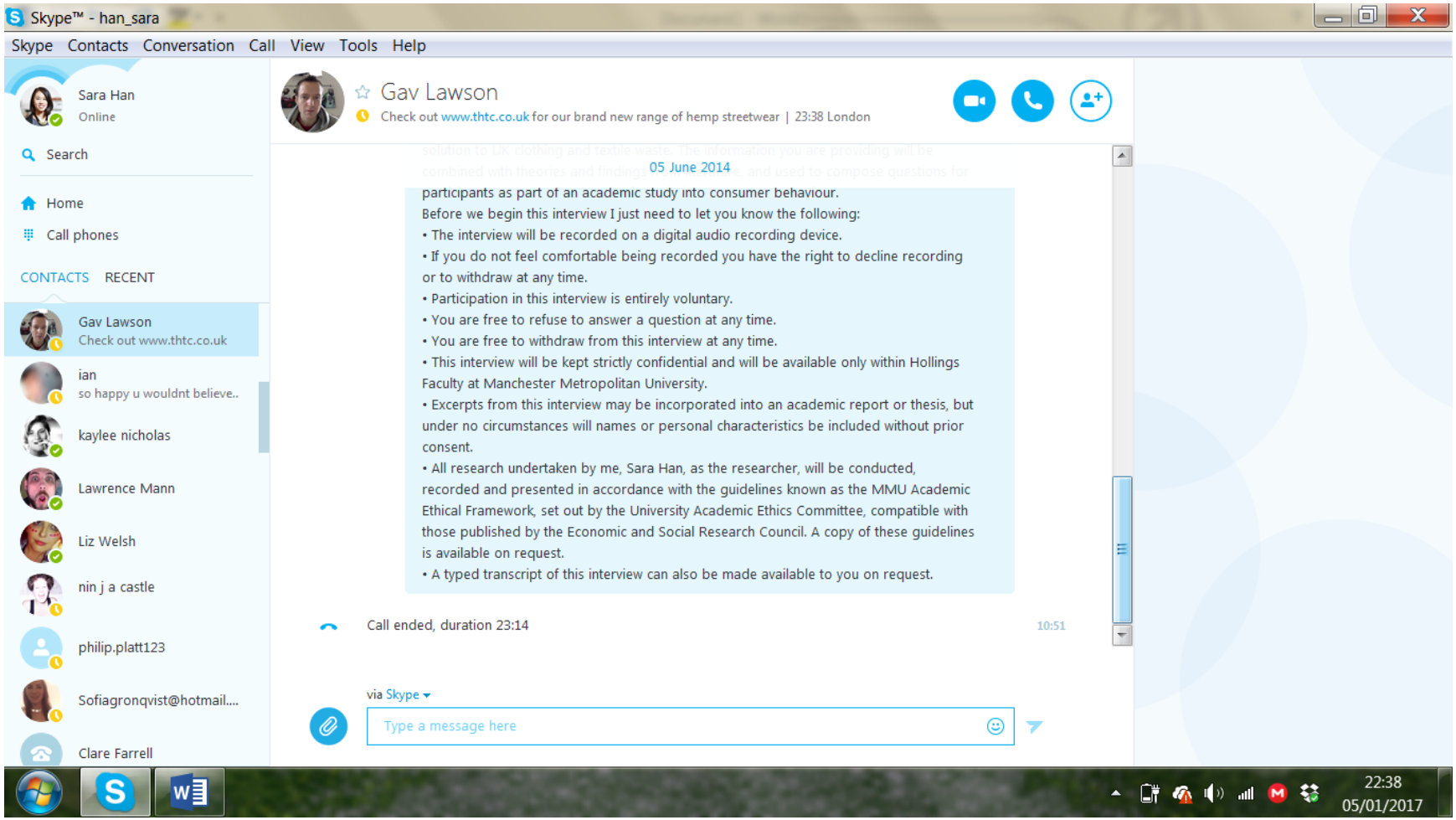
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior
via Skype
Type a message here
22:37
05/01/2017


Skype™ - han_sara
Skype Contacts Conversation Call View Tools Help
Sara Han
Online
Search
Home
Call phones
CONTACTS RECENT
Gav Lawson
Check out www.thtc.co.uk
ian
so happy u wouldnt believe..
kaylee nicholas
Lawrence Mann
Liz Welsh
nin j a castle
philip.platt123
Sofiagronqvist@hotmail....
Clare Farrell
Gav Lawson
Check out www.thtc.co.uk for our brand new range of hemp streetwear | 23:38 London
05 June 2014
participants as part of an academic study into consumer behaviour.
Before we begin this interview I just need to let you know the following:
• The interview will be recorded on a digital audio recording device.
• If you do not feel comfortable being recorded you have the right to decline recording or to withdraw at any time.
• Participation in this interview is entirely voluntary.
• You are free to refuse to answer a question at any time.
• You are free to withdraw from this interview at any time.
• This interview will be kept strictly confidential and will be available only within Hollings Faculty at Manchester Metropolitan University.
• Excerpts from this interview may be incorporated into an academic report or thesis, but under no circumstances will names or personal characteristics be included without prior consent.
• All research undertaken by me, Sara Han, as the researcher, will be conducted, recorded and presented in accordance with the guidelines known as the MMU Academic Ethical Framework, set out by the University Academic Ethics Committee, compatible with those published by the Economic and Social Research Council. A copy of these guidelines is available on request.
• A typed transcript of this interview can also be made available to you on request.
Call ended, duration 23:14
10:51
via Skype
Type a message here
22:38
05/01/2017

Sara Han

From: jonnet <jonnetm@hotmail.com>
Sent: 17 November 2016 14:15
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Hiya Sara

Fine to reference me directly. Hope all's going well with the PhD. Would be great to see it when it's done.

All the best
Jonnet

From: Sara Han <S.Han@mmu.ac.uk>
Sent: 17 November 2016 10:31
To: jonnetm@hotmail.com
Cc: info@jonnetmiddleton.com
Subject: Interview confidentiality inquiry

Hello Jonnet,

I hope you are well. I am getting in touch regarding an interview carried out with you in July 2015 for my PhD research.

I would like to inquire what your preferences would be regarding references to yourself, the organisations you have set up and those you are associated with in my PhD thesis and any future publications from the work.

Are you happy to be named directly or would you prefer all references to be anonymised?

Please do let me know your preferences and I will make sure they are adhered to.

Thanks so much and best regards,

Sara

1

Sara Han

From: Lizzie Harrison <lizzie@antiformonline.co.uk>
Sent: 16 November 2016 09:08
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Hi Sara,

Yes please by all means nam Antiform! Can't wait to see you next week - 2 whole days of having out!!

Lizzie

Lizzie Harrison
+447717742328
lizzie@antiformonline.co.uk

> On 15 Nov 2016, at 17:40, Sara Han <S.Han@mmu.ac.uk> wrote:
>
> Hi Lizzie,
>
> I hope all is well with you. I take it you will be at the Circular Transitions conference next week? It will be good to catch up again.
>
> I'm getting in touch to ask if you would mind me referring to you and to Antiform by name in my PhD thesis and any future publications from the work, or if you would prefer any references to be anonymised?
>
> Please do let me know your preferences and I will make sure they are adhered to.
>
> Best regards,
>
> Sara
>
>

Manchester Metropolitan University

HOLLINGS FACULTY - RESEARCH ETHICS

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They are compatible with those published by the ESRC and other responsible bodies.

Name of student: **Sara Han**

Research title: **Can Sustainable Design Solutions Reduce UK Clothing and Textile Waste?**

Student statement:

Before any research is undertaken, I would like to assure collaborators and participants of the following points:

- Participation in an interview is entirely voluntary.
- Participants are free to refuse to answer a question at any time.
- Participants are free to withdraw from an interview at any time.
- The interview/questionnaire will be kept strictly confidential and will be available only within Hollings Faculty.
- Excerpts from this interview/questionnaire may be incorporated into a project report or dissertation, but under no circumstances will names or personal characteristics be included without prior consent.

Signed: ..... Print Name: **Sara Han**

Interviewee acceptance:

Signed: ..... Print Name: E Harrison

Date: 14/07/2014

This is your copy to keep

Sara Han

From: Goodone <info@goodone.co.uk>
Sent: 22 November 2016 12:00
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Hi Sara,

Feel free to put my name to what i said. Bets of luck with the last push. I bet your loosing your mind everybody who I know that has done a doctorate goes slightly mad at the end!!!

Just a quick up date i'm doing some work with Reverse Resources these days, I expect you know about their organisation.

GOOD LUCK

Nin

Nin Castle
Creative Director/Founder
nin@goodone.co.uk
Tel: Spain - 0034 696 961 934
UK - 0044 7833 125 098
Skype: Nin.J.A.Castle

On 15 Nov 2016, at 19:17, Sara Han <S.Han@mmu.ac.uk> wrote:

Hi Nin,

I hope all is well with you. I am now getting close to submitting my PhD thesis and am getting in touch to ask if you would mind me referring to you and to Goodone directly by name in my thesis and any future publications from the work, or if you would prefer any references to be anonymised?

Please do let me know what you prefer and I will make sure this is adhered to.

Best regards,

Sara

Sara Han

From: Orsola de Castro <orsola@estethica.com>
Sent: 17 November 2016 14:20
To: Sara Han
Subject: Re: Interview confidentiality inquiry

Hi sara
You can use my name of course and ref from somewhere.
The brand however is. Is closed as of very early
2015.

Orsola.

Orsola de Castro
orsola@estethica.com
orsola@fashionrevolution.org
Tel +447767477206
twitter/Instagram @orsoladecastro

On 17 Nov 2016, at 10:24 am, Sara Han <S.Han@mmu.ac.uk> wrote:

> Hello Orsola,
>
> I hope you are well. I am getting in touch regarding an interview carried out with you in May 2014 for my PhD research.
>
> I would like to inquire what your preferences would be regarding references to yourself and to From Somewhere in my PhD thesis and any future publications from the work.
>
> Are you happy for From Somewhere and for yourself to be named directly or would you prefer all references to be anonymised?
>
> Please do let me know your preferences and I will make sure they are adhered to.
>
> Thanks so much and best regards,
>
> Sara
>
> Sara Li-Chou Han
>
> Research Associate, Resyntex Project

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Re: Interview confidentiality inquiry

SASS BROWN <sassbrown@me.com>

Sat 19/11/2016 15:34

To: Sara Han <S.Han@mmu.ac.uk>;

Hi Sara,

Thanks for the outreach, and apologies for my slow response. I am happy to be named in any references, and actually prefer to be. My current title is Interim Dean - Fashion Institute of Technology, School or Art and Design. However if it is more appropriate, I have no problem being referenced as a writer and researcher on Ethical Fashion.

Please send me any links to published content.

Warm regards, and good luck!

Sass Brown
"Be the change you wish to see in the world" - Mahatma Gandhi
www.ecofashiontalk.com
Sign up for the Eco Fashion Talk Newsletter at http://www.ecofashiontalk.com/newsletter/

On Nov 17, 2016, at 05:29 AM, Sara Han <S.Han@mmu.ac.uk> wrote:

> Hello Sass,
>
> I hope you are well. I am getting in touch regarding an interview carried out with you in June 2012 for my PhD research.
>
> I would like to inquire what your preferences would be regarding references to yourself and the organisations you are associated with in my PhD thesis and any future publications from the work.
>
> Are you happy to be named directly or would you prefer all references to be anonymised?
>
> Please do let me know your preferences and I will make sure they are adhered to.
>
> Thanks so much and best regards,
>
> Sara
>
> Sara Li-Chou Han
>
> Research Associate, Resyntex Project

Manchester Metropolitan University

HOLLINGS FACULTY - RESEARCH ETHICS

Any research undertaken by the student stated below will be conducted, recorded and presented in accordance with the guidelines set out by the University Academic Ethics Committee. These guidelines are known as the MMU Academic Ethical Framework and may be accessed at:
http://www.red.mmu.ac.uk/documents/res_files/ethics/ethical_framework.doc
They are compatible with those published by the ESRC and other responsible bodies.

Name of student: .Sara Han.

Project/Dissertation title: **Design for Upcycling in the UK Womenswear Industry**.

Student statement:

Before any research is undertaken, I would like to assure collaborators and participants of the following points:

- Participation in an interview is entirely voluntary.
- Participants are free to refuse to answer a question at any time.
- Participants are free to withdraw from an interview at any time.
- The interview/questionnaire will be kept strictly confidential and will be available only within Hollings Faculty.
- Excerpts from this interview/questionnaire may be incorporated into a project report or dissertation, but under no circumstances will names or personal characteristics be included without prior consent.

Signed: Print Name: Sara Han

Interviewee acceptance:

Signed: ..... Print Name: Sass Brown

SASS BROWN.

Date: 12th May 2012

This is your copy to keep